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ABSTRACT

This project was an effort to field test a theoretical model suggested in an American Association of Colleges for Teacher Education publication entitled "An Illustrated Model for the Evaluation of Teacher Education Graduates." The model was designed to obtain objective, quantifiable data on graduates of the teacher preparation program of Western Kentucky University. Of the 40 student teachers randomly selected for the first phase of the evaluation system, 22 obtained teaching positions the following year and comprised the sample for the second phase. Instrumentation and records used for data collection consisted of a biographical questionnaire, a personality scale, pupil ratings, peer and supervisor ratings, direct classroom observational systems, and transcripts of grades. In both phases, data were collected during two visits to each participant's classroom by trained observers. At the end of the data collection period, all information was coded and stored on computer disc. Appropriate statistics were computed and tabulated for study by faculty. Data obtained from teachers near the end of the first year of teaching were compared with data obtained from the same participants while they were student teaching. (Descriptive conclusions, with supportive tables, and appendixes with material from the project are included.) (JA)

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Ronald D. Adams
Office of Educational Research
Western Kentucky University
Bowling Green, Kentucky 42101

FOLLOW-UP AND EVALUATION OF TEACHER EDUCATION GRADUATES - A PILOT STUDY

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PREFACE

Western Kentucky University has embarked upon a careful and scholarly investigation of one of the most challenging problems facing teacher education today, that of actually evaluating the competency of the people it is sending into the profession. It is suggested that this evaluation may very well be a "first" for colleges of teacher education, for while many efforts have been made to evaluate by opinionaire or survey, this is a systemic effort based on performance criteria.

This document contains a detailed report of the pilot efforts in testing Western Kentucky University's Teacher Corporation Evaluation Model. It should be kept clearly in mind that this is a unique effort to accomplish an objective which has proven elusive to all who have attempted to systematically evaluate teaching behavior. It is recognized that the model has many imperfections and that it is, as we have described, a model which can and should be modified and revised until it, or some subsequent model, effectively serves the evaluation needs of teacher education.

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CHAPTER I

INTRODUCTION

A review of current educational literature leaves little doubt of the importance being placed on evaluation of teacher education programs. Professional educators at all levels are requesting that teacher preparation programs in colleges and universities be continually evaluated and pertinent research be conducted to ensure improvement in teacher competency. Questions are being asked that will require institutions of higher learning to assess their product - the teacher.

The Recommended Standards for Teacher Education (13, p. 12) has emphasized teacher evaluation. Standard 5.1 states, "The institution conducts a well-defined plan for evaluating the teachers it prepares." In explaining this standard the authors report, "The ultimate criteria for judging a teacher education program is whether it produces competent graduates who enter the profession and perform effectively." Sandefur (11), in a study of 12 institutional cases reviewed by the National Council for the Accreditation of Teacher Education (NCATE) Evaluation Board, found that a greater percentage of questions were asked regarding the evaluation of teachers than questions on any other topic.

While there has been research conducted in the area of teacher evaluation, further exploration seems to be warranted. Sandefur and Bressler (12, p. 1) have stated, "Until recently, no generally acceptable system has existed for the study of teaching behavior. As a consequence, the teaching profession has lacked even a uniform terminology to describe teaching, and the evaluation and study of teaching has depended primarily

upon the value judgments of the observer." Stiles and Parker (14, p. 1418) have suggested that empirical studies are few in number. They state, "Evaluation of entire teacher education programs, or even segments of programs, is spotty and inadequate." Overing (8, p. 13), in a summary of research related to the evaluation of teacher preparation graduates, has stated, "Perhaps it [his summary] will be of some use if it brings to our attention the fact that while many writers have advocated the approach to evaluation now suggested in the Recommended Standards, almost no one has attempted it."

At the request of the American Association of Colleges for Teacher Education's Commission on Standards, Sandefur (11) authored a monograph entitled, An Illustrated Model for the Evaluation of Teacher Education Graduates. This model has provided a systematic approach to the evaluation of teacher education programs that allows for the improvement of such programs and that meets the spirit intended by Standard 5.1 of the Recommended Standards (13). Sandefur proceeded from two positions: (a) there is sufficient evidence, supported by research, from which generalizations about good teaching and good teachers can be drawn; (b) instruments already exist which enable systematic evaluation of the product of teacher preparation programs.

After extensive review of relevant research, Sandefur (11, p. 4-8) suggested three generalizations with corresponding sub-generalizations about good teaching and good teachers:

1. Good teaching utilizes maximal involvement of the student in direct experential situations.

   - Good teachers attempt to foster problem-oriented, self directed, actively inquiring patterns of learning behavior in their students.

- Good teachers elicit pupil-initiated talk and allow more pupil-initiated exploration and trial solutions.

- When teachers try to elicit independent thinking from their students, they get it.

- Good teachers involve students in decision-making processes in active, self-directing ways.

- Teachers who are interested in student involvement are less prone to dominate the classroom with lecture and other teacher activities.

2. Good teaching encourages maximal "freedom" for the student.

- Good teachers use significantly more praise and encouragement for the student.

- They accept, use, and clarify students' ideas more often.

- They give fewer directions, less criticism, less justification of the teacher's authority, and less negative feedback.

- They use a relaxed, conversational teaching style.

- They use more divergent questions, do more probing, and are less procedural.

- They are more inclined to recognize the "affective climate" of the classroom and are responsible to student feelings.

- Teachers with low dogmatism scores are more likely to use indirect methods than those with more closed-minded attitudes.

3. Good teachers tend to exhibit identifiable personal traits broadly characterized by warmth, a democratic attitude, affective awareness, and a personal concern for students.

- Good teachers exhibit characteristics of fairness and democratic behavior.

- They are responsive, understanding, and kindly.

- They are stimulating and original in their teaching.

- They are responsible and systematic.

- They are poised and confident, and emotionally self-controlled.

- They are adaptable and optimistic.

- They are well-versed in subject matter and give evidence of a broad cultural background.

In addition, Sandefur (11) recommended an objective and systematic model for evaluating the product of teacher preparation programs in light of the above generalizations. The instruments described in his evaluation model were chosen for their proven worth as research tools and how well they related to these generalizations. He further suggested that teachers be evaluated while engaged in student-teaching as well as after they enter the teaching field.

Western Kentucky University is engaged in an evaluative study designed to determine the feasibility of implementing such a model. The initial phase of the evaluation model is concerned with the preparation program with emphasis on the student teaching experience. Subsequent phases deal with obtaining data from subjects as practicing teachers. This report is specifically concerned with the investigation of information obtained from the initial phase, the student-teaching experience, and the second phase, after one year of teaching experience.

Purpose and Objectives

The purposes of this study were to test the feasibility of conducting the second phase of an evaluation model of the scope and complexity suggested by Sandefur (11), and to compare data obtained from first year teachers with similar data collected while these same teachers were in the pre-service program.

The specific objectives were as follows:

1. Gather and report a summation of data on first year teachers who participated in this initial phase of the evaluation model.
   Data obtained were:

a. Career base-line data
b. Authoritarian personality test results.
c. Ratings of teachers by pupils, peers, and supervisors.
d. Data on teacher classroom behavior as measured by interaction analysis and the Classroom Observation Record.

2. Comparison of data obtained from teachers while in the pre-service program and after one year of teaching experience to include:

a. Authoritarian personality test results.
b. Rating of teachers by pupils, peers, and supervisors.
c. Interaction analysis ratios
d. Classroom Observation Record

3. Provide for the dissemination of data to Western Kentucky University faculty responsible for the preparation of teachers.

Definition of Terms

The following terms are operationally defined for use in this study:

1. Phase 1 - The initial phase of the evaluation model designed to obtain information on subjects while in the pre-service program. Data was obtained while subjects were student-teaching.

2. Phase 2 - The second phase of the evaluation model designed to obtain data from subjects near the end of their first year of teaching experience.

3. Student teacher supervisor - A member of the faculty of Western Kentucky University whose duties include the supervision of student-teachers.

4. Cooperating teacher (Phase 1) - An elementary or secondary teacher elected to supervise a student-teacher from Western Kentucky University.

5. Pupils - Students taught by the subjects in this study.

6. Observers - Personnel employed by the Office of Educational Research, Western Kentucky University, specially trained in the data collecting techniques used in this study.

7. Peer teachers (Phase 2) - Two teachers from the same school as the subject, one chosen by the subject and the other chosen by the principal.

8. Supervisor (Phase 2) - The person to whom the subject was immediately responsible. In this study the principal was the supervisor in all cases.

9. Bi-term - one half of a regular semester, approximately eight weeks.

Limitations

The population from which subjects were selected for Phase 1 of this study was limited by the following criteria:

1. The student was student-teaching during the second bi-term of the spring semester, 1972.

2. The student planned to teach in Kentucky during the 1972-1973 school year.

3. The student was a resident of Kentucky at least one year prior to entering Western Kentucky University.

4. The student voluntarily agreed to participate in this study.

These limitations were imposed on the population to make this study more feasible with regard to future follow-up of subjects. Further, voluntary participation was deemed necessary due to the extensive collection of data and due to the degree of cooperation required from the subjects for subsequent data collection.

Subjects for Phase 2 were limited to those student teachers who participated in Phase 1 of the evaluation model and were employed as teachers in Kentucky schools for the 1972-73 school year.

Hypotheses

In comparing Phase 1 and Phase 2, the following null hypotheses were tested for both the elementary and secondary samples.

H_1: There is no significant difference in authoritarian personality test results as measured in Phase 1 and Phase 2 respectively.

H_2: There is no significant difference between Phase 1 and Phase 2 as to cooperating teacher's ratings and peer teacher's ratings.

There is no significant difference between Phase 1 and Phase 2 for the teaching dimensions:

H_{2a} Subject Matter Competence
H_{2b} Relations with Students
H_{2c} Appropriateness of Assignments
H_{2d} Overall Effectiveness

H_3: There is no significant difference between Phase 1 and Phase 2 as to cooperating teacher's ratings and supervisor's ratings.

There is no significant difference between Phase 1 and Phase 2 for the teaching dimensions:

H_{3a} Subject Matter Competence
H_{3b} Relations with Students
H_{3c} Appropriateness of Assignments
H_{3d} Overall Effectiveness

H_4: There is no significant difference between Phase 1 and Phase 2 pupil evaluation.

There is no significant difference between Phase 1 and Phase 2 for the dimensions:

H_{4a} Friendly - Cheerful
H_{4b} Knowledgeable - Poised
H_{4c} Lively - Interesting
H_{4d} Firm Control (Discipline)
H_{4e} Non-Directive (Democratic)
H_{4f} Composite Score

H_5: There is no significant difference in data obtained from the Classroom Observation Record for Phase 1 and Phase 2.

There is no significant difference between Phase 1 and Phase 2 for the diminsions:

H_{5a} Apathetic - Alert
H_{5b} Obstructive - Responsive
H_{5c} Uncertain - Confident
H_{5d} Depending - Initiating
H_{5e} Partial - Fair
H_{5f} Autocratic - Democratic
H_{5g} Aloof - Responsive
H_{5h} Restricted - Understanding
H_{5i} Harsh - Kindly

H_{5j} Dull - Stimulating
H_{5k} Stereotyped - Original
H_{5l} Apathetic - Alert
H_{5m} Unimpressive - Attractive
H_{5n} Evading - Responsive
H_{5o} Erratic - Steady
H_{5p} Excitable - Poised
H_{5q} Uncertain - Confident
H_{5r} Disorganized - Systematic
H_{5s} Inflexible - Adaptable
H_{5t} Pessimistic - Optimistic
H_{5u} Immature - Integrated
H_{5v} Narrow - Broad

H_6: There is no significant difference between Phase 1 and Phase 2 concerning interaction analysis ratios.

There is no significant difference between Phase 1 and Phase 2 concerning the ratios:

H_{6a} Indirect to Direct (i/d)
H_{6b} Indirect to Direct (I/D)
H_{6c} Student Talk to Teacher Talk
H_{6d} Silence to Total
H_{6e} Lecture to Total
H_{6f} Indirect to Total
H_{6g} Direct to Total
H_{6h} Teacher Talk to Total
H_{6i} Student Questions to Student Response
H_{6j} Student Talk to Total

CHAPTER II

METHODS AND PROCEDURES

The purpose of this chapter is to provide a detailed description of the procedures followed in data collection. Part of the data for this study was obtained while subjects were in the pre-service program. Therefore, the following description includes both Phase 1 and Phase 2 methods and procedures. These procedures were designed to demonstrate how the evaluation model was implemented to evaluate Western Kentucky University's Teacher Preparation Program.

Pre-Planning for Phase 1

Numerous preliminary planning sessions were held concerning the conduct of this study with the Dean and Assistant Deans of the College of Education and with Department Heads and various members of the secondary and elementary education departments. Support for the study and suggested procedures were solicited and obtained during these meetings. Following this initial planning period, a formal proposal was prepared and submitted for approval to the Dean of the College of Education. A time schedule was prepared to include deadlines for activities critical to the conduct of this study. This schedule was adhered to throughout the study.

An advisory committee was selected by the researcher to aid in initial planning and to make recommendations concerning administrative details. This committee was composed of members from various departments within the College of Education. Especially helpful were faculty from the

Counselor Education Department and School Administration Department. The Counselor Education Department provided expertise in the administration and interpretation of the F-scale. The School Administration Department provided valuable assistance in project administration and initial contact with schools. A more detailed explanation of how school administration personnel were utilized appears later in this report.

Selection of Subjects for Phase 1

The population for this study was defined as those student-teachers who met the following criteria:

1. The student entered practice teaching during the second bi-term of the spring semester, 1972.
2. The student planned to teach in Kentucky during the 1972-73 school year.
3. The student was a resident of Kentucky at least one year prior to entering Western Kentucky University.
4. The student agreed to voluntarily participate in the study.

Each prospective student teacher for the second bi-term of the spring semester was given a questionnaire containing the above four criteria plus name and certification classification (See Appendix A). The majority of the questionnaires were distributed, completed and collected at a meeting held for student teachers during the second week of the spring semester. At this meeting the purpose of the project and the items of the questionnaire were explained. The collected questionnaires were compared with a student teacher roster obtained from the Office of Student Teaching to determine the students from whom questionnaires had not been obtained. Telephone interviews were utilized to obtain the required information from remaining students.

Secondary and elementary student teachers for the second bi-term numbered 432. Of those, 186 students met the criteria for population membership. The first three criteria eliminated 176 students from membership in the population. Thirty-nine students met the first three criteria but chose not to participate in the study. Table 2.1 contains descriptive information concerning population selection. Eighty-three percent of the students who met the first three criteria for population membership volunteered for participation in this study.

TABLE 2.1

Distribution of Student Teachers by Criteria for Population Membership

	Secondary	Elementary	Total
Acceptable	106	80	186
Unacceptable			
Not Teaching, Second Bi-term	42	2	44
Not Planning to teach in Kentucky	57	9	66
Non-Resident of Kentucky	49	17	66
Non-Volunteer	24	15	39
Sub Total	172	43	215
Unable to Contact	13	18	31
TOTAL	291	141	432

A stratified random sample of 40 students was obtained from the above defined population. Stratification was based on the type of teaching certification sought. Twenty subjects from each strata, elementary and secondary education majors, were randomly selected. A table of random numbers was used to ensure randomness. Complete data were obtained on 38 of the original 40 subjects. One subject was eliminated because his student teaching assignment was that of supervising students in a shop setting rather than actual classroom teaching. The other subject was eliminated due to illness. A total of 18 secondary and 20 elementary student teachers comprised the sample measured in this study.

Subjects for Phase 2

Subjects for Phase 2 were those participants in Phase 1 who were employed as teachers in Kentucky for the 1972-73 school year. A questionnaire was sent to each participant of Phase 1 the last week of September 1972. This questionnaire was designed to obtain information concerning their teaching status. After four weeks, Phase 1 participants who had not returned their questionnaires were contacted by telephone and the required information obtained.

It was determined that fifteen elementary teachers and seven secondary teachers were employed as teachers in Kentucky schools. Thus, 75 percent of elementary subjects and 39 percent of the secondary subjects were employed as teachers for the year following their graduation.

Instrumentation

Instruments and records used for data collection consisted of five general types: a questionnaire, a personality scale, rating scales, direct

classroom observational systems, and transcripts of subjects' grades. These instruments were selected on the basis of their (a) merit as a research tool, (b) contribution of the data to the objectives of the study, (c) ease of administration, and (d) availability of required data. The following discussion is a description of each instrument utilized to collect data for this study.

Career Base Line Data Questionnaire

A questionnaire was prepared by the researcher to obtain career base line data not readily available from other sources. Items were included that provide information concerning demographic data, professional data, and school and professional activities participation. "Fill-in-the-blank" and "check-the-appropriate-response" items were constructed to facilitate subject completion of the questionnaire. This information was obtained while the subjects were in the pre-service program and updated again at the end of their first year of teaching. Appendix A contains a copy of this instrument.

Transcripts of Grades

A complete transcript of each subject's grades was obtained from the Registrar's Office at the end of the spring semester. Grade point averages (GPA) were computed for the subject's major(s), minor(s), professional education course work, and total grade point average on a 4.0 scale. Their student teaching grades were recorded but were not included in the professional preparation course work GPA.

Personality Scale

The F-scale, forms 45 and 40, was developed by Adorno and others (1) to measure individual prejudices and antidemocratic tendencies.

This 28 item scale refers to opinions regarding a number of social groups and issues about which some people agree and others disagree. Respondents answered each item as follows:

+3 = strong support, agreement

+2 = moderate support, agreement

+1 = slight support, agreement

-1 = slight opposition, disagreement

-2 = moderate opposition, disagreement

-3 = strong opposition, disagreement

The above scoring code was converted to positive numbers by the following method to eliminate negative numbers for statistical analysis:

+3 = 7

+2 = 6

+1 = 5

-1 = 3

-2 = 2

-3 = 1

Reliability of the F-scale was determined by Adorno (1) as .90. A copy of the F-scale, forms 45 and 40, is found in Appendix A.

Rating Scales

Teacher Evaluation by Peer/Supervisor

Each subject's cooperating teacher was asked to complete the Teacher Evaluation by Peer/Supervisor, a rating form derived from faculty evaluation forms designed at Kansas State Teachers' College (10). This form allowed cooperating teachers, peer teachers, and supervisors to rate subjects concerning three matters of administrative decisions and four

areas of teacher behavior. Sandefur (10, p. 23) has suggested this form be used as a means of collecting rating data on teaching behavior as there appears to be no validated form for obtaining such data available. A copy of this form is found in Appendix A.

Student Evaluation of Teaching

The Student Evaluation of Teaching (SET), developed by Veldman and Peck (15), was utilized to obtain ratings from pupils concerning five dimensions of teacher behavior. Veldman (15, p. 1) describes these dimensions as:

1. Friendly and cheerful
2. Knowledgeable and poised
3. Lively and interesting
4. Firm control (discipline)
5. Non-Directive (democratic procedure)

The SET was derived from the Pupil Observation Survey Report (POSR) developed by McClain (15). The reliabilities obtained on the POSR, a 38 item instrument, were, respectively .92, .72, .91, .81, and .89. Veldman (15) found that a 10 item instrument, SET, could be used to obtain ratings that were highly correlated with ratings obtained from the POSR. These correlations were .91, .87, .77, .91, and .78 respectively.

Veldman (15) found the SET could be used beginning with grade three if questions were read and explained by the proctor. Data from this instrument were obtained from pupils of subjects teaching grades three and above. Appendix A contains an SET rating form and scoring procedures as suggested by Veldman (15).

Direct Classroom Observational System

Classroom Observation Record

The Classroom Observation Record, developed by Ryans (9), was used

to assess four dimensions of pupil behavior and eighteen dimensions of teacher behavior. Each dimension of pupil and teacher behavior was carefully described and defined in a glossary which accompanied the recording form. A seven scale interval was used to rate each of the pupil and teacher behavior dimensions with an "N" category for dimensions not observed. (The "N" category was not utilized in this study.) The observers circled the appropriate rating for each dimension immediately after each observation period. An example of this rating form and glossary is given in Appendix A.

Interaction Analysis

A 14 category interaction analysis system was utilized to record observed classroom behavior. This system was suggested by Sandefur (11) and is a combination of Flander's (3) and Hough's (7) systems of interaction analysis. Nine categories of teacher talk, two categories of student talk, and three non-verbal categories were utilized by observers to record classroom behavior. A list of the categories and a recording sheet is located in Appendix A. The observer recorded a numerical value corresponding to a particular category every three seconds or every time the category changed. Thus, an objective record was obtained of the verbal interaction occurring in the classroom. Two 20-minute observations per subject were recorded for this study.

Frequencies for each category were tallied and a 14 x 14 matrix was developed for statistical treatment. Ten measures of classroom behavior were obtained from the data collected by interaction analysis. Appropriate categories were combined and ratios computed to obtain the following measures:

1. i/d = indirect to direct ratio = categories 1 through 3 divided by categories 7, 8, 9.

2. I/D = indirect to direct ratio = categories 1 through 5 divided by categories 6 through 9.

3. ST/TT = student talk to teacher talk = categories 10, 11 divided by categories 1 through 9.

4. Sil/Tot = ratio of silence to total = categories 12, 13, 14 divided by total categories.

5. Lec/Tot = Lecture to Total = category 6 divided by total of categories.

6. TT/Tot = Teacher Talk to Total = categories 1 through 9 divided by total of categories.

7. ST/Tot = Student Talk to Total = categories 10, 11 divided by total of categories.

8. SQ/SR = Student Question to Student Response = category 11 divided by category 10.

9. i/Tot = Indirect to Total = categories 1, 2, 3 divided by total of categories.

10. d/Tot = Direct to Total = categories 7, 8, 9 divided by total categories.

Training of Observers

A team of four observers was utilized for data collection during both Phase 1 and Phase 2. Phase 1 observers consisted of two university faculty members and two graduate assistants from the Office of Educational Research. Observers for Phase 2 were one faculty member and three graduate assistants from the Office of Educational Research. One observer, the project director, was a member of both observer teams. Training for both Phase 1 and Phase 2 was conducted in a similar fashion. A consultant from Kansas State Teacher's College was employed to conduct a concentrated three-day training session approximately

six weeks prior to collecting data. Additionally, bi-weekly practice sessions were held to improve techniques in the use of both instruments. Audio tape recordings, video tape recordings, films, and live observations were utilized during the training periods.

The training procedures for learning interaction analysis closely resembled those suggested by Flanders (4). These procedures included memorization of categories, practice in coding and recording, and discussion of types of behavior as related to the categories. Audio tapes, provided by the consultant, were used in practice sessions in interaction analysis. These tapes provided examples of different types of teaching behavior.

Training in the use of the Classroom Observation Record consisted largely of studying the items and glossary of terms; viewing films, video tapes, and live teaching situations; and discussing the observed teaching behavior to obtain a common point of reference for rating. Numerous practice sessions were conducted to enhance observers' understanding of the items and to obtain observer agreement on the rating of teacher behavior.

Reliability coefficients were computed at two-week intervals for both Phase 1 and Phase 2 to provide a progress check on inter-observer reliability. A final reliability check was made two days prior to the first scheduled observations. Specially selected audio tapes, video tapes, and films were employed to determine observer reliability.

The Scott coefficient, recommended by Flanders (5, p. 161-166), was used to determine inter-observer reliability for a twenty-minute interaction analysis recording session. This method is unaffected by low sequences and is more sensitive at higher levels of reliability for a twenty-minute interaction analysis recording session.

The following two formulae were used in computing "pi":

$$\pi = \frac{Po - Pe}{1 - Pe}$$

where P_o is the proportion of agreement and P_e is the proportion of agreement expected by chance and

$$Pe = \sum_{i=1}^{k} P_i^2$$

where K is the number of categories and P_i is the proportion of tallies in each category. Inter-observer reliabilities obtained for Phase 1 were .87, .88, .89, and .92, respectively. Phase 2 inter-observer reliability coefficients were .88, .92, .93, and .94, respectively.

An inter-class correlation technique, suggested by Guilford (6, p. 299-300) was used to determine the intercorrelation of ratings on the Classroom Observation Record. Data from two twenty-minute films were used to obtain reliability coefficients. The inter-class correlation (r) obtained for Phase 1 at each observation was .76 and .77, respectively. The Phase 2 inter-class correlations were .77 and .75, respectively. The average inter-class correlations were .92 and .93, respectively, for Phase 1 and .93 and .90, respectively, for Phase 2.

Collection of Data

Initial data were collected for Phase 1 during a special meeting attended by subjects, the project director, a graduate assistant, and a faculty consultant from the Counselor Education Department. This meeting was held prior to the subjects' student teaching experience. Subjects were notified by letter of their selection as participants and of the meeting. Five subjects unable to attend the meeting were contacted by telephone and individual appointments were made to obtain the required data.

A detailed explanation of the nature and scope of the project was presented to the subjects and a question and answer period followed. During the presentation, it was stressed that all individuals' data would be kept in strict confidence. Subjects were asked verbally for voluntary participation a second time, and all present agreed.

The initial data collection included the administration of the career base line data questionnaire and the F-scale. The career base line data questionnaire was distributed, completed by the subjects and collected. Questions pertaining to items contained in the questionnaire were answered by the project director or graduate assistant. The F-scale was administered by a faculty consultant from the Counselor Education Department.

Procedures for completing this instrument were explained and subjects were requested to be honest in their responses. These initial data were placed in folders and stored until all data had been collected.

Administrative Procedures

Administrators in the various school districts where Phase 1 subjects were student teaching and Phase 2 subjects were employed as teachers were made aware of the project and their permission was obtained for observers to enter the required classrooms. This was accomplished both years with the help of four faculty members from the Department of School Administration within the College of Education. These faculty members were each assigned various school districts where subjects were teaching. They were responsible for personally contacting the superintendents and concerned principals in the districts to explain the project and to obtain permission for the conduct of this study. These contacts were made approximately two months prior to observers entering classrooms. In all cases,

administrators within the school districts agreed to cooperate in this project.

The cooperating teachers participating in Phase 1 were also contacted prior to the observation of student teachers to obtain their permission and cooperation. The project director made personal visits to each classroom and explained the project to each cooperating teacher. Tentative times were agreed on for the observations. Cooperating teachers were asked to plan the student teacher's activity so that they were in a teaching situation during the periods they were to be observed. The cooperating teachers were contacted at least six weeks prior to the beginning of observations. In all cases, the cooperating teachers agreed to participate in the project.

The teachers in Phase 2 were contacted by telephone approximately two months prior to the planned visitation period. Times and dates were established for the observation to take place. In each case, the participant agreed to the observation.

After the tentative observation appointments were obtained, an observation schedule was determined. Times when observers were available were scheduled to correspond to times set for appointments. For Phase 1 subjects, the majority of the observations were obtained during the fifth and sixth weeks. All observations were completed at the end of the seventh week.

Phase 2 subjects were scheduled for observations during the last two weeks in March and first week in April, 1973. The observation schedule was met for all but one of the Phase 2 subjects. Because of scheduling difficulties, data for one subject was not obtained until the latter part of April.

Observation of Subjects

Both in Phase 1 and Phase 2, two observations were made during the scheduled time period. Both observations were of the same class and at the same time of the day. A twenty-minute interaction analysis recording and ratings from the Classroom Observation Record were obtained at each observation. The observer began the interaction analysis five to ten minutes after the class started. The COR was completed at the end of each class.

The SET was administered to the pupils during the last ten minutes at the second observation. Pupils were instructed on completing the form and were requested not to sign their names. For grades three and four, each item was read to the students before they circled the response. Neither Phase 1 subjects nor Phase 2 subjects were present in the classroom when the SET was administered. Pupils were assured that information would be kept confidential.

The TEPS was completed by cooperating teachers for Phase 1 subjects at the last observation period. For Phase 2 subjects, TEPS information was obtained from peer teachers and their immediate supervisor. One peer teacher was selected by the subject and the other by the subject's supervisor. In all cases, the supervisor for Phase 2 subjects was the principal of the school in which the subjects were teaching. The peer teachers and supervisors had a choice of completing the TEPS during the last observation period, which was during school hours, or completing the form at their leisure and mailing it to the Office of Educational Research, Western Kentucky University.

Analysis and Dissemination of Data

At the completion of the Phase 2 data collection period, instruments were scored and data key punched onto computer cards. Phase 1 and Phase 2 data were placed onto computer disc for ease of access and storage. Appropriate computer programs were used to obtain means, standard deviations, and/or frequency counts for variables measured in Phase 2. A repeated measures program, prepared by Dayton (2, p. 246-256) was employed to compare data obtained in Phase 1 and Phase 2. Results from the analysis of data are presented in Chapter III of this report.

A major objective of this study was to provide for the dissemination of data to faculty concerned with elementary and secondary education programs. A copy of this report will be made available to faculty in the Elementary and Secondary Education Departments. Each department will be asked to prepare a written response to this report to include:

1. How well does this report contribute to the measurement of departmental objectives?
2. Are there requests for additional analysis of data to further study the variables measured?
3. Are there suggestions for the addition of variables not measured and/or for the deletion of variables not considered useful?
4. What are the suggested changes in the preparation program that will enhance the desired outcomes of graduates?

The written response is to be presented to the Dean of the College of Education and to the director of this project. The proposed course of action will be reviewed by the faculty and administration of the College of Education prior to the 1974-1975 academic year. Decisions will be made on curriculum revision based on the proposed plan.

The determination of the success of this report in aiding faculty in making decisions concerning curriculum change is beyond the scope of this report. However, the provision for dissemination of results has been established.

CHAPTER III

RESULTS

This chapter is devoted to the presentation and discussion of data collected in this study. Since secondary and elementary education students generally followed different programs of study and the summary data indicates hetergeneous grouping, analysis of data for secondary and elementary subjects is reported separately. Data that provide demographic information of possible interest to the reader, but are not directly related to the objectives of this study, are included in Appendix B.

Data analysis and discussion appears under the heading of the instrument used to collect the data. The following is a list of those instruments:

1. F-scale - authoritarian personality test results.
2. Teacher Evaluation by Peer/Supervisor - ratings on four dimensions of teaching behavior by cooperating teachers and supervisors and peers of first year teachers.
3. Student Evaluation of Teaching - ratings obtained from pupils of subjects on five dimensions of teaching behavior.
4. Classroom Observation Record - ratings of four pupil behavior dimensions and 18 teacher behavior dimensions by trained observers.
5. Interaction Analysis - description of teacher classroom behavior utilizing 10 ratios computed from 14 behavior categories recorded by the observers.

Generally findings will be discussed and followed by summary data presented in tabular form. Each table contains means, standard deviations, F-values, and probability levels (N.S., .05, .01) for each of the variables investigated. F-values were computed using a repeated measures

test of significance between means. Complete source tables for F-value calculations are contained in Appendix C.

F-Scale

When data obtained from the F-scale were subjected to analysis, a significant difference at the .01 level occurred between Phase 1 and Phase 2 for elementary subjects. Secondary subjects showed a small or insignificant change. Since the mean for elementary subjects was rather large for Phase 1 ($\overline{X}$=104.33), part of the difference could be attributed to natural regression toward the mean for Phase 2. However, a determination of the reasons for elementary subjects scoring highly authoritarian or the significant decrease in means from Phase 1 to Phase 2 are beyond the scope of this study. In light of the findings presented in Table 3.1, the null hypothesis, H_1 is rejected for elementary subjects, but retained for secondary subjects.

TABLE 3.1

Summary Analysis of Data Obtained from F-Scale for Elementary and Secondary Subjects

		Phase 1		Phase 2			
		Mean	S.D.	Mean	S.D.	F	P
1.	Elementary*	104.33	19.49	91.27	23.74	12.33	.01
2.	Secondary**	79.57	11.32	78.71	11.41	0.03	N.S.

*N = 15

**N = 7

$F_{.01}$ (1,14) = 8.86

$F_{.05}$ (1,6) = 5.99

Teacher Evaluation by Peer/Supervisor

The Teacher Evaluation by Peer/Supervisor (TEPS) was administered to the subject's cooperating teachers during Phase 1 and to supervisors (principals) and peer teachers working with the subjects during Phase 2. Comparisons made between Phase 1 data and Phase 2 data are reported for supervisors and peers for both elementary and secondary subjects.

Peer Teacher and Cooperating Teacher Comparison

Summary analysis of data from the TEPS for peer teachers is contained in Tables 3.2 and 3.3 for elementary and secondary subjects, respectively. No significant differences were noted for either elementary or secondary subjects when cooperating teachers' ratings from Phase 1 were compared with peer teachers' ratings from Phase 2. The mean ratings were high for both cooperating and peer ratings as a five point rating scale was used to obtain ratings on the four dimensions of teaching. The null hypotheses H_2 was retained for peer teacher comparisons.

Supervisor and Cooperating Teacher Comparisons

Tables 3.4 and 3.5 contain data comparisons for cooperating teachers and supervisors. There were no significant differences evident for elementary subjects on any of the four dimensions measured and the null hypothesis H_3 was retained. For secondary subjects, however, a significant difference at the .05 level of confidence was detected for the dimension "Relations with Students." The null hypothesis H_3 was rejected for secondary subjects indicating that principals rated first year teachers lower than cooperating teachers rated student teachers on the dimension of student relations. The null hypothesis was retained for each of the other variables measured by the TEPS.

TABLE 3.2

Summary Analysis of Data Obtained from TEPS by Cooperating Teachers and Peer Teachers for Elementary Subjects

		Phase 1*		Phase 2**			
		Mean	S.D.	Mean	S.D.	F	P
1.	Subject Matter Competence	4.00	0.82	4.00	0.71	0.0	N.S.
2.	Relations with Students	4.71	0.49	4.29	1.22	0.94	N.S.
3.	Appropriateness of Assignments	4.42	0.54	4.00	0.96	1.07	N.S.
4.	Overall Classroom Effectiveness	3.85	0.69	4.07	1.06	0.30	N.S.

* Data Obtained from Cooperating Teachers
N = 15, $F_{.05}$ (1,14) = 4.60

** Data Obtained from Peer Teachers

TABLE 3.3

Summary Analysis of Data Obtained from TEPS by Cooperating Teachers and Peer Teachers for Secondary Subjects

		Phase 1*		Phase 2**			
		Mean	S.D.	Mean	S.D.	F	P
1.	Subject Matter Competence	4.00	0.82	4.00	0.71	0.0	N.S.
2.	Relations With Students	4.71	0.49	4.29	1.22	0.94	N.S.
3.	Appropriateness of Assignments	4.42	0.54	4.00	0.96	1.07	N.S.
4.	Overall Classroom Effectiveness	3.85	0.69	4.07	1.06	0.30	N.S.

* Data Obtained from Cooperating Teachers
N = 7, $F_{.05}$ (1,14) = 5.99

** Data Obtained from Peer Teachers

TABLE 3.4

Summary Analysis of Data Obtained from TEPS by Cooperating Teachers and Administrators for Elementary Subjects

	Phase 1*		Phase 2**			
	Mean	S.D.	Mean	S.D.	F	P
1. Subject Matter Competence	4.46	0.74	4.33	0.72	0.32	N.S.
2. Relations with Students	4.46	0.91	4.47	0.83	0.00	N.S.
3. Appropriateness of Assignments	4.33	0.90	4.33	0.72	0.00	N.S.
4. Overall Classroom Effectiveness	4.53	0.74	4.47	0.52	0.09	N.S.

* Data Obtained from Cooperating Teachers
N = 15, $F_{.05}$ (1,14) = 4.60

** Data Obtained from Supervisors

TABLE 3.5

Summary Analysis of Data Obtained from TEPS by Cooperating Teachers and Administrators for Secondary Subjects

	Phase 1*		Phase 2**			
	Mean	S.D.	Mean	S.D.	F	P
1. Subject Matter Competence	4.00	0.81	3.71	1.25	0.63	N.S.
2. Relations with Students	4.71	0.48	4.00	0.82	6.25	.05
3. Appropriateness of Assignments	4.42	0.53	4.14	0.90	0.63	N.S.
4. Overall Classroom Effectiveness	3.85	0.69	1.00	0.18	0.18	N.S.

* Data Obtained from Cooperating Teachers
N = 7, $F_{.05}$ (1,6) = 5.99

** Data Obtained from Supervisors

Student Evaluation of Teaching

Data obtained from the Student Evaluation of Teaching were analyzed for change between Phase 1 and Phase 2. None of the dimensions tested were found to be significantly different from Phase 1 to Phase 2 for elementary subjects, and the null hypothesis H_4 was retained. There was a significant difference in pupil's preception of secondary subjects for the SET dimension "Lively and Interesting." Hypothesis H_4 was rejected at the .05 level of probability. The other null sub-hypotheses under H_4 were retained for secondary subjects. In the case of the elementary subjects, the probability of making a Type II error was increased due to the small sample size.

It can be noted that pupil's preceptions of teaching behavior were generally lower in Phase 2 for both secondary and elementary subjects. Many factors may have contributed to this occurrence in the data. There was a difference in the length of time that the subject had been with the pupils when observations were made during Phase 1 and Phase 2. Also, in Phase 1 the cooperating teacher's presence may have had an influence on the pupil's preceptions of the subject. However, it is the author's opinion that as more data are collected, these differences will be substantiated. Table 3.6 and Table 3.7 contain the summary analysis of data for elementary and secondary subjects, respectively.

Classroom Observation Record

From Table 3.8 and Table 3.9, one dimension of pupil behavior and two dimensions of teacher behavior were found to differ significantly from Phase 1 to Phase 2 for both elementary and secondary subjects. Elementary subjects were found to decrease significantly in the areas of

TABLE 3.6

Summary Analysis of Data Obtained from
Student Evaluation of Teaching for Elementary Subjects

		Phase 1		Phase 2			
		Mean	S.D.	Mean	S.D.	F	P
1.	Friendly and Cheerful	367.30	23.36	342.14	42.47	1.14	N.S.
2.	Knowledgeable and Poised	349.90	20.03	325.50	28.61	4.30	N.S.
3.	Lively and Interesting	343.80	21.46	322.14	48.12	1.17	N.S.
4.	Firm Control	335.00	13.99	386.43	78.62	2.65	N.S.
5.	Non-Directive (Democratic)	348.30	45.89	243.07	69.02	0.08	N.S.
6.	Composite Score	332.78	12.85	303.86	47.18	2.43	N.S.

$N = 5$, $F_{.05}(1,4) = 7.71$

TABLE 3.7

Summary Analysis of Data Obtained from
Student Evaluation of Teaching for Secondary Subjects

		Phase 1		Phase 2			
		Mean	S.D.	Mean	S.D.	F	P
1.	Friendly and Cheerful	343.42	38.17	320.71	51.62	4.72	N.S.
2.	Knowledgeable and Poised	347.78	22.97	338.64	32.59	0.37	N.S.
3.	Lively and Interesting	273.28	30.34	247.64	48.44	6.08	.05
4.	Firm Control	279.14	27.18	284.79	32.24	0.14	N.S.
5.	Non-Directive	248.14	20.25	243.86	43.51	0.04	N.S.
6.	Composite Score	248.14	20.25	243.86	43.51	0.04	N.S.

$N = 7$, $F_{.05}(1,6) = 5.99$

student alertness, teacher fairness, and the teacher's demonstrated knowledge of subject. Secondary subjects, however, increased from Phase 1 to Phase 2 in the areas of student confidence, teacher adaptability, and the teacher's demonstrated knowledge of subject. The null hypotheses rejected were H_{5a}, H_{5e}, and H_{5v} for elementary subjects, and H_{5c}, H_{5s}, and H_{5v} for secondary subjects.

Interaction Analysis

No significant differences were found when Phase 1 and Phase 2 interaction analysis ratios were compared for elementary and secondary subjects. Table 3.10 and Table 3.11 contain these comparisons, respectively. Only in the proportion of lecture (8, Table 3.10) was there an indication of differences between phases for elementary subjects. The null hypothesis, H_6, was retained for elementary subjects.

A somewhat different picture was presented in Table 3.11 than in Table 3.10. When interaction analysis ratios were compared for secondary subjects, there were a number of areas where differences between ratios approached significance. It should also be noted that the mean and standard deviation of the "i/d ratio" (1, Table 3.11) for Phase 1 was inflated as compared to Phase 2. An extreme score made by one subject was found to be the cause of this rather large discrepancy. While a number of F-values approached significance, the null hypothesis, H_6, was also retained for secondary subjects.

TABLE 3.8

Summary Analysis of Data Obtained from
Classroom Observation Record for Elementary Subjects

	Phase 1		Phase 2		F	P
	Mean	S.D.	Mean	S.D.		
1. Apathetic to Alert	5.70	1.04	4.87	1.20	5.64	<.05
2. Obstructive to Responsible	5.00	1.43	4.50	1.56	2.84	N.S.
3. Uncertain to Conficent	5.13	1.35	4.87	1.30	0.29	N.S.
4. Dependent to Initiating	4.26	1.29	3.80	1.53	1.44	N.S.
5. Partial to Fair	5.83	0.91	4.87	1.27	5.99	<.05
6. Autocratic to Democratic	3.50	1.34	3.77	1.60	0.45	N.S.
7. Aloof to Responsive	5.06	1.41	4.63	1.51	0.99	N.S.
8. Restricted to Initiating	4.56	1.17	4.47	1.26	0.06	N.S.
9. Harsh to Kindly	4.56	1.01	4.43	1.37	0.19	N.S.
10. Dull to Stimulating	4.73	1.38	4.57	1.50	0.12	N.S.
11. Sterotyped to Original	4.20	1.17	3.77	1.49	1.27	N.S.
12. Apathetic to Alert	5.06	1.08	5.27	1.24	0.39	N.S.
13. Unimpressive to Attractive	5.96	0.95	6.47	0.52	3.18	N.S.
14. Evading to Responsive	5.96	0.76	5.50	1.25	1.62	N.S.
15. Erratic to Steady	5.13	0.93	5.80	1.26	3.18	N.S.
16. Excitable to Poised	5.06	1.30	5.53	1.25	1.42	N.S.
17. Uncertain to Confident	5.03	1.09	5.27	1.66	0.31	N.S.
18. Disorganized to Systematic	5.83	0.89	5.37	1.03	1.81	N.S.
19. Inflexible to Adaptable	3.90	1.24	4.43	1.49	1.88	N.S.
20. Pessimistic to Optimistic	4.50	1.14	4.87	1.66	0.72	N.S.
21. Immature to Integrated	5.06	0.96	4.83	1.10	0.33	N.S.
22. Narrow to Broad	5.73	1.04	4.63	0.81	12.04	<.01

N = 15, $F_{.05}(1,14) = 4.60$ $F_{.01}(1,14) = 8.86$

TABLE 3.9

Summary Analysis of Data Obtained from
Classroom Observation Record for Secondary Subjects

	Phase 1		Phase 2		F	P
	Mean	S.D.	Mean	S.D.		
1. Apathetic to Alert	3.85	1.28	4.50	1.08	0.92	N.S.
2. Obstructive to Responsive	4.57	2.07	4.86	1.44	0.11	N.S.
3. Uncertain to Confident	3.64	0.98	4.64	0.80	7.00	<.05
4. Dependent to Initiating	3.35	1.34	4.21	0.81	1.95	N.S.
5. Partial to Fair	4.50	0.81	5.50	0.58	3.82	N.S.
6. Autocratic to Democratic	2.78	0.95	4.29	1.63	3.50	N.S.
7. Aloof to Responsive	4.42	0.88	5.07	1.51	1.76	N.S.
8. Restricted to Understanding	4.42	1.05	5.21	1.25	2.61	N.S.
9. Harsh to Kindly	4.64	1.06	4.93	1.06	0.46	N.S.
10. Dull to Stimulating	3.92	1.39	4.71	1.41	1.80	N.S.
11. Sterotyped to Original	3.16	1.28	3.71	1.55	0.46	N.S.
12. Apathetic to Alert	4.78	0.90	5.07	1.27	0.43	N.S.
13. Unimpressive to Attractive	6.21	0.56	6.36	0.94	0.30	N.S.
14. Evading to Responsive	5.35	0.89	5.29	0.99	0.03	N.S.
15. Erratic to Steady	4.35	0.94	5.07	1.46	1.49	N.S.
16. Excitable to Poised	4.07	1.33	5.43	1.10	4.21	N.S.
17. Uncertain to Confident	4.14	1.37	5.36	1.35	4.79	N.S.
18. Disorganized to Systematic	4.57	0.78	5.36	0.94	5.62	N.S.
19. Inflexible to Adaptable	3.14	1.57	5.00	1.26	13.34	<.05
20. Pessimistic to Optimistic	4.50	1.38	5.29	1.04	1.93	N.S.
21. Immature to Integrated	4.14	1.14	4.64	1.11	0.47	N.S.
22. Narrow to Broad	4.35	1.21	5.43	0.84	11.44	<.05

N = 7, $F_{.05}(1,6) = 5.99$

TABLE 3.10

Summary Analysis of Data Obtained from
Interaction Analysis Ratios for Elementary Subjects

	Phase 1		Phase 2			
	Mean	S.D.	Mean	S.D.	F	P
1. Indirect to Direct (i/d)	0.78	0.60	0.81	0.57	0.02	N.S.
2. Indirect to Direct (I/D)	1.10	0.49	0.94	0.51	0.71	N.S.
3. Student Talk to Teacher Talk	0.57	0.26	0.65	0.31	0.65	N.S.
4. Teacher Talk to Total	0.46	0.12	0.48	0.09	0.08	N.S.
5. Student Talk Total	0.26	0.12	0.30	0.12	0.71	N.S.
6. Stud. Questions Stud. Resp.	0.10	0.10	0.10	0.09	0.04	N.S.
7. Silence to Total	0.28	0.19	0.23	0.14	0.62	N.S.
8. Lecture to Total	0.10	0.06	0.15	0.07	3.64	N.S.
9. Indirect to Total	0.09	0.05	0.08	0.04	0.11	N.S.
10. Direct to Total	0.13	0.05	0.12	0.04	0.40	N.S.

$N = 15$, $F_{.05\ (1,14)} = 4.60$

TABLE 3.11

Summary Analysis of Data Obtained from
Interaction Analysis Ratios for Secondary Subjects

	Phase 1		Phase 2			
	Mean	S.D.	Mean	S.D.	F	P
1. Indirect to Direct (i/d)	4.30	9.57	1.98	1.84	0.58	N.S.
2. Indirect to Direct (I/D)	0.58	0.26	0.93	0.47	4.39	N.S.
3. Student Talk to Teacher Talk	0.80	1.32	1.18	1.18	3.52	N.S.
4. Teacher Talk to Total	0.53	0.25	0.46	0.24	5.45	N.S.
5. Student Talk to Total	0.25	0.22	0.34	0.11	1.81	N.S.
6. Stud. Questions to Stud. Resp.	0.29	0.30	0.18	0.17	1.81	N.S.
7. Silence to Total	0.22	0.25	0.21	0.17	0.05	N.S.
8. Lecture to Total	0.28	0.22	0.20	0.16	3.52	N.S.
9. Indirect to Total	0.06	0.04	0.08	0.06	1.46	N.S.
10. Direct to Total	0.07	0.05	0.05	0.03	3.30	N.S.

$N = 7$, $F_{.05\ (1,6)} = 5.99$

CHAPTER 4

SUMMARY AND CONCLUSIONS

This project was an effort to field-test a theoretical model suggested in an AACTE publication entitled An Illustrated Model for the Evaluation of Teacher Education Graduates (11). Both the theoretical model and the Western Kentucky field-test were the outgrowth of a national concern for the evaluation of teacher education graduates. The concern for evaluation was given impetus by Standard 5.1 of the revised Recommended Standards for Teacher Education (13). That standard specifically called for a systematic evaluation of the product of teacher education programs with provisions for feedback to the ongoing programs.

In the three years since the implementation of the new revised standards, hundreds of institutional cases presented to the NCATE Evaluation Boards and ultimately to the NCATE Council, have provided evidence that institutions have not known how to cope with the intent of Standard 5.1. The Western Kentucky University Teacher Preparation Evaluation Program has been an effort to demonstrate that a systematic evaluation of demonstrable teaching behaviors can be accomplished. The model was based on generalizations drawn from research on what constitutes good teaching and good teachers. The data was obtained from varied sources, but the primary sources were direct classroom observation systems including interaction analysis, the Classroom Observation Record, and student evaluations. The data collection procedures, storage and retrieval of data, and analysis and dissemination procedures constitute a workable management modle for the evaluation of teachers.

The general purpose of this study was to test the feasibility of implementing an evaluation model of the scope and complexity as suggested by Sandefur (11). The successful completion of data collection and analysis is evidence that such a program is not only feasible, but may be implemented with minimal commitment of resources. The large data file available for study by faculty is also indicative of the value of this system.

A second objective of this project was to compare data obtained in Phase 2 with Phase 1 data to determine what changes, if any, were evident between student teaching and after a year of experience. The following conclusions were drawn within the limitations of this study:

1. Elementary teachers become less authoritarian after one year of teaching experience.
2. There is no difference between cooperating teacher's ratings of student teaching behavior and peer and supervisor ratings after one year of teaching.
3. Secondary supervisor's ratings are lower than cooperating teacher's ratings for the teaching dimension "Relations with Students."
4. Pupils do not rate elementary or secondary teachers differently after one year of teaching experience compared to ratings obtained during student teaching.
5. Ratings of elementary teachers decreased in the areas of student alertness, teacher fairness and teacher's demonstrated knowledge of subject after one year of teaching experience.
6. Classroom interaction does not differ after one year of teaching experience for elementary or secondary subjects.

It is recognized that the small number of subjects in this project allows for only tentative conclusions to be drawn. Additionally, it is recognized that the hypotheses tested are not a comprehensive treatment of the variables measured. However, as this system continues to provide additional data more definite conclusions concerning teaching behavior

may be made. Relationships among variables and factors related to effective teaching may be studied and programs changed to provide educational experiences needed to produce teachers with desired competencies.

BIBLIOGRAPHY

1. Adorno, T.W. et al. The Authoritarian Personality. New York: John Wiley & Sons, Inc., 1964.

2. Dayton, C. Mitchell. The Design of Educational Experiments. New York: McGraw Hill, 1970.

3. Flanders, Ned A. "Teacher Influence, Pupil Attitudes, and Achievement," U.S. Department of Health Education and Welfare, Office of Education, Final Report, Cooperative Research Project No. 397, 1960.

4. _____. Analyzing Teacher Behavior. Massachusetts: Addison-Wesley Publishing Co., 1960.

5. _____. "The Problem of Observer Training and Reliability," In Interaction Analysis: Theory, Research and Application, Edited by E.J. Aneidon and J.B. Hough. Massachusetts: Addison-Wesley, 1967.

6. Guilford, J. P. Fundamental Statistics in Psychology and Education. New York: McGraw Hill, 1965.

7. Hough, J. B. "An Observational System for the Analysis of Classroom Instruction," In Interaction Analysis: Theory Research and Application, Edited by E.J. Amidon and J.B. Hough. Massachusetts: Addison-Wesley, 1969.

8. Overing, R.L. Research Related to the Evaluation of Graduates of Teacher Preparation Programs Paper presented at annual meeting AERA, 1970. ERIC Service, ED 039200.

9. Ryans, David G. Characteristics of Teachers. Washington D.C.: American Council on Education, 1960.

10. Sandefur, J.T. et al. "Teaching Experience as a Modifier of Teaching Behavior" U.S. Department of Health, Education, and Welfare, Office of Education, Final Report, Cooperative Research Project No. 8-f-027, 1969.

11. _____. An Illustrated Model for the Evaluation of Teacher Education Graduates Washington D.C.: American Association of Colleges for Teacher Education, 1970.

12. _____. and Bressler, A.A. Classroom Observation Systems in Preparing School Personnel. Washington D.C.: ERIC Clearing House on Teacher Education, 1970.

13. Standards for Accreditation of Teacher Education. Washington D.C.: American Association of Colleges for Teacher Education, 1970.

14. Stiles, L.J. and Parker, R.P. "Teacher Education Programs" Encyclopedia of Educational Research Washington D.C.: The National Council for Accreditation of Teacher Education, 1970.

15. Veldman, Donald J. "Student Evaluation of Teaching" Research Methodolgy Monograph No. 10, Austin Research and Development Center, University of Texas, 1970

APPENDIX A

INSTRUMENTATION

Initial Follow-up Form
Career Base Line Data Questionnaire
F-Scale: Forms 45 and 40
Teacher Evaluation by Peer/Supervisor
Student Evaluation of Teaching
Classroom Observation Record
Interaction Analysis

INITIAL INFORMATION FORM
FOR STUDENT-TEACHER FOLLOW-UP STUDY

Please complete and return in self-addressed envelope by January 30, 1972.

Name _____

Campus Address _____

Phone _____

1. I plan to student teach the second bi-term of the Spring semester, 1972.

   YES ( ) NO ( )

2. I plan to teach in Kentucky during the school year, 1972-73.

   YES ( ) NO ( )

3. I was a resident of Kentucky at least one year prior to entering Western Kentucky University.

   YES ( ) NO ( )

4. I will participate in the follow-up study being conducted by the Office of Educational Research.

   YES ( ) NO ( )

5. I plan to be certified in

   Secondary Education ( ) Elementary Education ( )

CAREER BASE LINE DATA QUESTIONNAIRE

A. BIBLIOGRAPHICAL DATA

1. Name _____
2. Age _____
3. Sex _____
4. Race _____
5. High school from which you graduated _____
6. Year _____
7. Home Address _____
8. Year Graduated from WKU _____
9. Subject major(s) _____
10. Subject minor(s) _____
11. Teacher education major: Elem._____ Secondary_____
12. Marital status _____
13. Spouse's occupation _____
14. Father's occupation_____
15. Previous full time occupation(s) if any _____

    _____
16. Years of teaching experience _____
17. Do you intend to teach following graduation?

    immediately _____ at later time_____ no _____
18. When did you decide to enter the teaching profession?

    prior to entering college _____ during 1st year_____

    2nd year _____3rd year_____4th year_____grad. school_____
19. in what type of community were you reared?

    rural_____small town_____suburban_____metropolitan_____

CAREER BASE LINE DATA QUESTIONNAIRE
PHASE I CYCLE II (con't)

20. In what type of community do you prefer to live and teach?

rural_____small town_____suburban_____metropolitan_____

21. In what geographical area do you desire to teach?

Ky._____State bordering Ky._____ N.E._____S.E._____

N.W._____S.W._____Other_____

B. ACTIVITY PARTICIPATION

	H.S.	COLLEGE	AFTER COLLEGE
1-2 Athletics (varsity)			
3-4 Atheltics (intramural)			
5-6 Music			
7-8 Speech and/or drama			

Societies and Organizations at WKU

9. Social 10. Professional 11. Service 12. Other

F-SCALE: FORMS 45 AND 40

The following statements refer to opinions regarding a number of social groups and issues, about which some people agree and others disagree. Please mark each statement in the left-hand margin according to your agreement or disagreement as follows:

+1: slight support, agreement
+2: moderate support, agreement
+3: strong support, agreement

-1: slight opposition, disagreement
-2: moderate opposition, disagreement
-3: strong opposition, disagreement

_____1. Obedience and respect for authority are the most important virtues children should learn.

_____2. A person who has bad manners, habits, and breeding can hardly expect to get along with decent people.

_____3. If people would talk less and work more, everybody would be better off.

_____4. The business man and the manufacturer are much more important to society than the artist and the professor.

_____5. Science has its place, but there are many important things that can never be understood by the human mind.

_____6. Every person should have complete faith in some super-natural power whose decisions he obeys without question.

_____7. Young people sometimes get rebellious ideas, but as they grow up they ought to get over them and settle down.

_____8. What this country needs most, more than laws and political programs, is a few courageous, tireless, devoted leaders in whom the people can put their faith.

_____9. Nobody every learned anything really important except through suffering.

____10. No sane, normal, decent person could ever think of hurting a close friend or relative.

____11. What the youth needs most is strict discipline, rugged determination and the will to work and fight for family and country.

____12. An insult to our honor should always be punished.

____13. Sex crimes, such as rape and attacks on children, deserve more than mere imprisonment; such criminals ought to be publicly whipped, or worse.

____14. There is hardly anything lower than a person who does not feel a great love, gratitude, and respect for his parents.

____15. Most of our social problems would be solved if we could somehow get rid of the immoral, crooked, and feeble-minded people.

____16. Homosexuals are hardly better than criminals and ought to be severely punished.

____17. When a person has a problem or worry, it is best for him not to think about it, but to keep busy with more cheerful things.

____18. Nowadays more and more people are prying into matters that should remain personal and private.

____19. Some people are born with an urge to jump from high places.

____20. People can be divided into two distinct classes: the weak and the strong.

____21. Some day it will probably be shown that astrology can explain a lot of things.

____22. Wars and social trouble may someday be ended by an earthquake or flood that will destroy the whole world.

____23. No weakness or difficulty can hold us back if we have enough will power.

____24. Most people don't realize how much our lives are controlled by plots hatched in secret places.

____25. Human nature being what it is, there will always be war and conflict.

____26. Familiarity breeds contempt.

____27. Nowadays when so many different kinds of people move around and mix together so much, a person has to protect himself especially carefully against catching an infection or disease from them.

____28. The wild sex life of the old Greeks and Romans was tame compared to some of the goings-on in this country, even in places where people might least expect it.

Teacher Evaluation

by

Peer/Supervisor

_____ _____

Name of Teacher Evaluated School

_____

Grade or Subject Taught

Please check the appropriate items about yourself

☐ Female ☐ Male

☐ Peer (Colleague) ☐ Administrator or Supervisor

As a part of the continuing evaluation of select faculty of this School you are being asked to evaluate one of your fellow faculty members. Please answer the following items as candidly and consisely as possible. You may use the back of this page if additional space is needed.

1. What are your particular qualifications for evaluating this person?

2. Assuming this person is eligible, would you recommend promotion?
   Yes No Comment:

3. Assuming this person is eligible for tenure, would you recommend tenure?
   Yes No Comment:

4. Assuming this person is eligible for reappointment as a probationary faculty member, would you recommend reappointment?
   Yes No Comment:

Teaching is the most important task of the school In order to help the school to be informed regarding the quality of its teaching, you are requested to indicate your opinion of this instructor's performance in the four important dimensions of teaching described on the following pages. The highest rating is number 5; the lowest is number 1. Please encircle the number that represents your opinion of the instructor. Three of the five ratings for each dimension are described by words and phrases printed to the left of the numbers. The intermediate numbers may also be used for the expression of your opinions.

DIMENSIONS OF TEACHING	DESCRIPTIVE WORDS AND PHRASES	RATING
Subject Matter Competence	Thorough, broad, and accurate knowledge of theory and practice; very able to organize, interpret, explain and illustrate concepts and relationships.	5
		4
	Adequate understanding; most interpretations and explanations are clear	3
		2
	Knowledge of subject is limited; does not give clear explanations and illustrations.	1
Relations with Students	Excellent rapport; feeling of good-will prevails; very interested in students; easily approached; students are challenged yet individuality is respected.	5
		4
	Adequate rapport shows some interest in students; usually approachable; students are encouraged to participate; shows some sense of humor	3
		2
	Seems unfriendly and unresponsive; impatient; sometimes antagonizes students; too busy to be helpful.	1

DIMENSIONS OF TEACHING	DESCRIPTIVE WORDS AND PHRASES	RATING
Appropriateness of Assignments and Academic Expectations	Assignments are challenging; he allows for differences of ability but expects superior achievement; stresses important topics and concepts and avoids giving time to trivial details; demands critical and analytical thought; tests seem valid.	5
		4
	Most assignments are clear, reasonable and related to class work; expects understanding not memorization; recognizes individual differences among students but generally seems to ignore them; tests are usually related to assignments and class work.	3
		2
	Assignments are unrealistic, often not clear, not related to class work; students do not know what the teacher expects; tests seem unrelated to assignments and class work.	1
Overal Classroom Effectiveness	Lessons are carefully planned and show definite purpose; words come easily; well-organized ideas and concepts are clearly related; enthusiastic and stimulating; raises thought provoking questions; discussions are lively; pleasing manner, free from annoying mannerisms.	5
		4
	Usually well-prepared, purposes are usually clear; presentations are fairly well-organized; encourages student participation; objectionable mannerisms are not serious or numerous; asks some good questions.	3
		2

DIMENSIONS OF TEACHING	DESCRIPTIVE WORDS AND PHRASES	RATING
	Lessons not planned, purposes are lacking or vague; relationships of concepts are not explained; asks few questions; subject seems uninteresting to him; repeatedly exhibits annoying mannerisms.	1

You may wish to comment further on this instructor's teaching performance. If so, you may use the space below and the back of this page.

STUDENT EVALUATION OF TEACHING

D. J. VELDMAN and R. F. PECK

TEACHER'S LAST NAME: _____

SUBJECT: _____

SCHOOL: _____

CIRCLE THE RIGHT CHOICES BELOW

Teacher's Sex: M F

My Sex: M F

My Grade Level:

3 4 5 6 7 8 9 10 11 12

DO NOT USE

CIRCLE ONE OF THE FOUR CHOICES IN FRONT OF EACH STATEMENT.
THE FOUR CHOICES MEAN:

F = Very Much False
f = More False Than True
t = More True Than False
T = Very Much True

This Teacher:

F f t T	is always friendly toward students.
F f t T	knows a lot about the subject.
F f t T	is never dull or boring.
F f t T	expects a lot from students.
F f t T	asks for students' opinions before making decisions.
F f t T	is usually cheerful and optimistic.
F f t T	is not confused by unexpected questions.
F f t T	makes learning more like fun than work.
F f t T	doesn't let students get away with anything.
F f t T	often gives students a choice in assignments.

Scoring the SET

The Student Evaluation of Teachers (SET) was scored, as suggested by Veldman (16), in the following manner:

1) The responses were assigned the following values:

   F=1
   f=2
   t=3
   T=4

2) Means of each of the ten items were completed.

3) Item means are multiplied by 100.

4) These scores are then paired according to the dimension of teaching they are measuring. ie

   Item 1 with Item 6
   Item 2 with Item 7
   Item 3 with Item 8
   Item 4 with Item 9
   Item 5 with Item 10

   and the mean is found for each dimension.

5) In addition to scores on the five dimensions, a composit score was obtained by finding the mean of all ten item means.

Classroom Observation Record

Teacher Characteristics Study

Teacher_____ No.____ Sex____ Class or Subject_____ Date_____

City_____ School_____ Time_____ Observer_____

PUPIL BEHAVIOR										**REMARKS:**
1.	Apathetic	1	2	3	4	5	6	7	N	Alert
2.	Obstructive	1	2	3	4	5	6	7	N	Responsible
3.	Uncertain	1	2	3	4	5	6	7	N	Confident
4.	Dependent	1	2	3	4	5	6	7	N	Initiating
TEACHER BEHAVIOR										
5.	Partial	1	2	3	4	5	6	7	N	Fair
6.	Autocratic	1	2	3	4	5	6	7	N	Democratic
7.	Aloof	1	2	3	4	5	6	7	N	Responsive
8.	Restricted	1	2	3	4	5	6	7	N	Understanding
9.	Harsh	1	2	3	4	5	6	7	N	Kindly
10.	Dull	1	2	3	4	5	6	7	N	Stimulating
11.	Stereotyped	1	2	3	4	5	6	7	N	Original
12.	Apathetic	1	2	3	4	5	6	7	N	Alert
13.	Unimpressive	1	2	3	4	5	6	7	N	Attractive
14.	Evading	1	2	3	4	5	6	7	N	Responsible
15.	Erratic	1	2	3	4	5	6	7	N	Steady
16.	Excitable	1	2	3	4	5	6	7	N	Poised
17.	Uncertain	1	2	3	4	5	6	7	N	Confident
18.	Disorganized	1	2	3	4	5	6	7	N	Systematic
19.	Inflexible	1	2	3	4	5	6	7	N	Adaptable
20.	Pessimistic	1	2	3	4	5	6	7	N	Optimistic
21.	Immature	1	2	3	4	5	6	7	N	Integrated
22.	Narrow	1	2	3	4	5	6	7	N	Broad

Figure 2 (Continued)

GLOSSARY

(To be used with classroom observation record.)

Pupil Behaviors

1. Apathetic-Alert Pupil Behavior

Apathetic	Alert
1. Listless.	1. Appear anxious to recite and participate.
2. Bored-acting.	2. Watch teacher attentively.
3. Enter into activities half-heartedly.	3. Work concentratedly.
4. Restless.	4. Seem to respond eargerly.
5. Attention wanders.	5. Prompt and ready to take part in activities when they begin.
6. Slow in getting under way.	

2. Obstructive-Responsible Pupil Behavior

Obstructive	Responsible
1. Rude to one another and/or to teacher.	1. Courteous, co-operative, friendly with each other and with teacher.
2. Interrupting; demanding attention; disturbing.	2. Complete assignments without complaining or unhappiness.
3. Obstinate; sullen.	3. Controlled voices.
4. Refusal to participate.	4. Received help and criticism attentively.
5. Quarrelsome; irritable.	5. Asked for help when needed.
6. Engaged in name-calling and/or tattling.	6. Orderly without specific directions from teacher.
7. Unprepared	7. Prepared.

3. Uncertain-Confident Pupil Behavior

Uncertain	Confident
1. Seem afraid to try; unsure.	1. Seem anxious to try new problems or activities.
2. Hesitant; restrained.	2. Undisturbed by mistakes.
3. Appear embarrassed.	3. Volunteer to recite.
4. Frequent display of nervous habits, nail-biting, etc.	4. Enter freely into activities.
5. Appear shy and timid.	5. Appear relaxed.
6. Hesitant and/or stammering speech.	6. Speak with assurance.

4. Dependent-Initiating Pupil Behavior

Dependent	Initiating
1. Rely on teacher for explicit directions.	1. Volunteer ideas and suggestions.
2. Show little ability to work things out for selves.	2. Showed resourcefulness.
3. Unable to proceed when initiative called for.	3. Take lead willingly.
4. Appear reluctant to take lead or to accept responsibility.	4. Assume responsibilities without evasion.

Teacher Behaviors

5. Partial-Fair Teacher Behavior

Partial	Fair
1. Repeatedly slighted a pupil.	1. Treated all pupils approximately equally.
2. Corrected or criticized certain pupils repeatedly.	2. In case of controversy pupil allowed to explain his side.
3. Repeatedly gave a pupil special advantages.	3. Distributed attention to many pupils.
4. Gave most attention to one or a few pupils.	4. Rotated leadership impartially.
5. Showed prejudice (favorable or unfavorable) towards some social, racial, or religious groups.	5. Based criticism or praise on factual evidence, not hearsay.
6. Expressed suspicion of motives of a pupil.	

6. Autocratic-Democratic Teacher Behavior

Autocratic	Democratic
1. Tells pupils each step to take.	1. Guided pupils without being mandatory.
2. Intolerant of pupils' ideas.	2. Exchanged ideas with pupils.
3. Mandatory in giving directions; orders to be obeyed at once.	3. Encouraged (asked for) pupil opinion.
4. Interrupted pupils although their discussion was relevant.	4. Encouraged pupils to make own decisions.
5. Always directed rather than participated.	5. Entered into activities without domination.

7. Aloof-Responsive Teacher Behavior

Aloof	Responsive
1. Stiff and formal in relations with pupils.	1. Approachable to all pupils.
2. Apart; removed from class activity.	2. Participates in class activity.
3. Condescending to pupils.	3. Responded to reasonable requests and/or questions.
4. Routine and subject matter only concern; pupils as persons ignored.	4. Speaks to pupils as equals.
5. Referred to pupil as "this child" or "that child."	5. Commends effort.
	6. Gives encouragement.
	7. Recognized individual differences.

8. Restricted-Understanding Teacher Behavior

Restricted	Understanding
1. Recognized only academic accomplishments of pupils; no concern for personal problems.	1. Showed awareness of a pupil's personal emotional problems and needs.
2. Completely unsympathetic with a pupil's failure at a task.	2. Was tolerant of error on part of pupil.
3. Called attention only to very good or very poor work.	3. Patient with a pupil beyond ordinary limits of patience.
4. Was impatient with a pupil.	4. Showed what appeared to be sincere sympathy with a pupils' viewpoint.

9. Harsh-Kindly Teacher Behavior

Harsh

1. Hypercritical; fault-finding.
2. Cross; curt.
3. Depreciated pupil's efforts; was sarcastic.
4. Scolds a great deal.
5. Lost temper.
6. Used threats.
7. Permitted pupils to laugh at mistakes of others.

Kindly

1. Goes out of way to be pleasant and/or to help pupils; friendly.
2. Give a pupil a deserved compliment.
3. Found good things in pupils to call attention to.
4. Seemed to show sincere concern for a pupil's personal problem.
5. Showed affection without being demonstrative.
6. Disengaged self from a pupil without bluntness.

10. Dull-Stimulating Teacher Behavior

Dull

1. Uninteresting, monotonous explanations.
2. Assignments provide little or no motivation.
3. Fails to provide challenge.
4. Lack of animation.
5. Failed to capitalize on pupil interests.
6. Pedantic, boring.
7. Lacks enthusiasm; bored acting.

Stimulating

1. Highly interesting presentation; gets and holds attention without being flashy.
2. Clever and witty, though not smart-alecky or wise-cracking.
3. Enthusiastic; animated.
4. Assignments challenging.
5. Took advantage of pupil interests.
6. Brought lesson successfully to a climax.
7. Seemed to provoke thinking.

11. Stereotyped-Original Teacher Behavior

Stereotyped

1. Used routine procedures without variation.
2. Would not depart from procedure to take advantage of a relevant question or situation.
3. Presentation seemed unimaginative.
4. Not resourceful in answering questions or providing explanations.

Original

1. Used what seemed to be original and relatively unique devices to aid instruction.
2. Tried new materials or methods.
3. Seemed imaginative and able to develop presentation around a question or situation.
4. Resourceful in answering question; had many pertinent illustrations available.

12. Apathetic-Alert Teacher Behavior

Apathetic

1. Seemed listless; languid; lacked enthusiasm.
2. Seemed bored by pupils.
3. Passive in response to pupils.
4. Seemed preoccupied.
5. Attention seemed to wander.
6. Sat in chair most of time; took no active part in class activities.

Alert

1. Appeared buoyant; wide-awake; enthusiastic about activity of the moment.
2. Kept constructively busy.
3. Gave attention to, and seemed interested in, what was going on in class.
4. Prompt to "pick up" class when pupils' attention showed signs of lagging.

13. Unimpressive-Attractive Teacher Behavior

Unimpressive	Attractive
1. Untidy or sloppily dressed.	1. Clean and neat.
2. Inappropriately dressed.	2. Well-groomed; dress showed good taste.
3. Drab, colorless.	3. Posture and bearing attractive.
4. Posture and bearing unattractive.	4. Free from distracting personal habits.
5. Possessed distracting personal habits.	5. Plainly audible speech; good expression; agreeable voice tone; good inflection.
6. Mumbled; inaudible speech; limited expression; disagreeable voice tone; poor inflection.	

14. Evading-Responsible Teacher Behavior

Evading	Responsible
1. Avoided responsibility; disinclined to make decisions.	1. Assumed responsibility; makes decisions as required.
2. "Passed the buck" to class, to other teachers, etc.	2. Conscientious.
3. Left learning to pupil, failing to give adequate help.	3. Punctual.
4. Let a difficult situation get out of control.	4. Painstaking; careful.
5. Assignments and directions indefinite.	5. Suggested aids to learning.
6. No insistance on either individual or group standards.	6. Controlled a difficult situation.
7. Inattentive with pupils.	7. Gave definite directions.
8. Cursory.	8. Called attention to standards of quality.
	9. Attentive to class.
	10. Thorough.

15. Erratic-Steady Teacher Behavior

Erratic	Steady
1. Impulsive; uncontrolled; temperamental; unsteady.	1. Calm; controlled.
2. Course of action easily swayed by circumstances of the moment.	2. Maintained progress toward objective.
3. Inconsistent.	3. Stable, consistent, predictable.

16. Excitable-Poised Teacher Behavior

Excitable	Poised
1. Easily disturbed and upset; flustered by classroom situation.	1. Seemed at ease at all times.
2. Hurried in class activities; spoke rapidly using many words and gestures.	2. Unruffled by situation that developed in classroom; dignified without being stiff or formal.
3. Was "jumpy"; nervous.	3. Unhurried in class activities; spoke quietly and slowly.
	4. Successfully diverted attention from a stress situation in classroom.

17. Uncertain-Confident Teacher Behavior

Uncertain	Confident
1. Seemed unsure of self; faltering, hesitant.	1. Seemed sure of self; self-confident in relations with pupils.
2. Appeared timid and shy.	2. Undisturbed and unembarrassed by mistakes and/or criticism.
3. Appeared artificial.	
4. Disturbed and embarrassed by mistakes and/or criticism.	

Figure 2 (Continued)

18. Disorganized-Systematic Teacher Behavior

Disorganized	Systematic
1. No plan for class work.	1. Evidence of a planned though flexible procedure.
2. Unprepared.	2. Well prepared.
3. Objectives not apparent; undecided as to next step.	3. Careful in planning with pupils.
4. Wasted time.	4. Systematic about procedure of class.
5. Explanations not to the point.	5. Had anticipated needs.
6. Easily distracted from matter at hand.	6. Provided reasonable explanations.
	7. Held discussion together; objectives apparent.

19. Inflexible-Adaptable Teacher Behavior

Inflexible	Adaptable
1. Rigid in conforming to routine.	1. Flexible in adapting explanations.
2. Made no attempt to adapt materials to individual pupils.	2. Individualized materials for pupils as required; adapted activities to pupils.
3. Appeared incapable of modifying explanation or activities to meet particular classroom situations.	3. Took advantage of pupils' questions to further clarify ideas.
4. Impatient with interruptions and digressions.	4. Met an unusual classroom situation competently.

20. Pessimistic-Optimistic Teacher Behavior

Pessimistic	Optimistic
1. Depressed; unhappy.	1. Cheerful; good-natured.
2. Skeptical.	2. Genial.
3. Called attention to potential "bad."	3. Joked with pupils on occasion.
4. Expressed hopelessness of "education today," the school system, or fellow educators.	4. Emphasized potential "good."
5. Noted mistakes; ignored good points.	5. Looked on bright side; spoke optimistically of the future.
6. Frowned a great deal; had unpleasant facial expression.	6. Called attention to good points; emphasized the positive.

21. Immature-Integrated Teacher Behavior

Immature	Integrated
1. Appeared naive in approach to classroom situations.	1. Maintained class as center of activity; kept self out of spotlight; referred to class's activities, not own.
2. Self-pitying; complaining; demanding.	2. Emotionally well controlled.
3. Boastful; conceited.	

22. Narrow-Broad Teacher Behavior

Narrow	Broad
1. Presentation strongly suggested limited background in subject or material; lack of scholarship.	1. Presentation suggested good background in subject; good scholarship suggested.
2. Did not depart from text.	2. Drew examples and explanations from various sources and related fields.
3. Failed to enrich discussions with illustrations from related areas.	3. Showed evidence of broad cultural background in science, art, literature, history, etc.
4. Showed little evidence of breadth of cultural background in such areas as science, arts, literature, and history.	4. Gave satisfying, complete, and accurate answers to questions.
5. Answers to pupils' questions incomplete or inaccurate.	5. Was constructively critical in approach to subject matter.
6. Noncritical approach to subject.	

Category Number		Description of Verbal Behavior
1	T	ACCEPTS FEELING: accepts and clarifies the feeling and tone of students in a nonthreatening manner. Feelings may be positive or negative. Predicting and recalling feelings are also included.
2	E A	PRAISES OR ENCOURAGES: praises or encourages student action or behavior. Jokes that release tension not at the expense of another individual, nodding head or saying "uh-huh" or "go on" are included.
3	C H	ACCEPTS OR USES IDEAS OF STUDENT: clarifying, building on, developing and accepting ideas of students.
4	E	ASKS QUESTIONS: asking a question about content or procedure with the intent that the student should answer.
5	R	ANSWERS STUDENT QUESTIONS: direct answers to questions regarding content or procedure asked by students.
6	T	LECTURES: giving facts or opinions about content or procedures; expressing his own ideas; asking rehetorical questions.
7	A L	CORRECTIVE FEEDBACK: telling a student that his answer is wrong when the incorrectness of the answer can be established by other than opinion, i.e., empirical validation, definition or custom.
8	K	GIVES DIRECTIONS: directions, commands or orders to which a student is expected to comply.
9		CRITICIZES OR JUSTIFIES AUTHORITY: statements intended to change student behavior from a non-

Summary of the 14 Categories in the Observational System for the Analysis of Classroom Instruction.

		acceptable to an acceptable pattern; bawling out someone; stating why the teacher is doing what he is doing so as to achieve or maintain control; rejecting or criticizing a student's opinion or judgment.
10	STUDENT TALK	STUDENT TALK: talk by students in response to requests or narrow teacher questions. The teacher initiates the contact or solicits student's statement.
11	STUDENT	STUDENT QUESTIONS: questions concerning content or procedure that are directed to the teacher.
12	NON FUNCTIONAL	DIRECTED PRACTICE OR ACTIVITY: non-verbal behavior requested or suggested by the teacher. This category is also used to separate student to student response.
13		DEMONSTRATION: silence during periods when visual materials are being shown or when non-verbal demonstration is being conducted by the teacher
14		SILENCE OR CONFUSION: pauses, short periods of silence and periods of confusion in which communication cannot be understood by the observer.

APPENDIX B

DEMOGRAPHIC DATA

TABLE B.1
Age in Years of Subjects*

	Mean	S.D.
Elementary	23.87	6.14
Secondary	20.71	0.95

*Data Obtained in 1972

TABLE B.2
Sex of Subjects

	Male		Female	
	f	%	f	%
Elementary	0	0	15	100.0
Secondary	3	42.9	4	57.1

TABLE B.3
Race of Subjects

	White		Black		Other	
	f	%	f	%	f	%
Elementary	13	86.7	2	13.3	0	0
Secondary	7	100.0	0	0	0	0

TABLE B.4
Marital Status

	Single		Married		Divorced	
	f	%	f	%	f	%
Elementary	9	60.0	5	33.0	1	7.0
Secondary	5	72.0	2	28.0	0	0

TABLE B.5
Spouse's Occupation

	No Spouse	Student	Not Employed	Professional	Non-Professional
Elementary	10	0	0	3	2
Secondary	5	1	0	1	0

TABLE B.6
Preparation Category

Area	Frequency
Elementary	15
Secondary	7

TABLE B.7
First Major Area

Area	Frequency
Business	1
Elementary Education	15
English	2
Physical Education	1
Psychology	1
Social Science	2

TABLE B.8
Second Major Area

Area	Frequency
Health	1

TABLE B.9
First Minor Area

Area	Frequency
English	1
Library Science	1
Psychology	1
Social Science	4

TABLE B.10
Teaching Status*

	Teaching in Kentucky	Teaching Out of Kentucky	Not Teaching
Elementary	15	1	4
Secondary	7	0	11

*Data obtained from total sample of 20 Elementary and 20 Secondary

TABLE B.11
Decision to Enter Teaching

	Prior to College	1st Year College	2nd Year College	3rd Year College	4th Year College
Elementary	11	2	2	0	0
Secondary	5	1	1	0	0

TABLE B.12
Size of High School Attended

	Under 500 Students	500-1000 Students	Over 1000 Students
Elementary	4	7	3
Secondary	1	3	3

TABLE P.13
Size of Community Reared

	Rural		Small Town		Suburban		Metropolitan	
	f	%	f	%	f	%	f	%
Elementary	5	33.3	4	26.7	2	13.3	4	26.7
Secondary	2	28.6	4	57.1	1	14.3	0	0

TABLE B.14
Father's Occupation

	Not Employed	Professional	Non-Professional
Elementary	3	3	9
Secondary	0	2	5

TABLE B.15
Size of Community Desired*

	Rural		Small Town		Suburban		Metropolitan	
	f	%	f	%	f	%	f	%
Elementary	1	6.7	8	53.3	3	20.0	3	20.0
Secondary	1	14.3	1	14.3	5	71.4	0	0

*Data Obtained in 1972

TABLE B.16
Geographic Area Desired*

	Kentucky	State Bordering Kentucky	NE-US	SE-US
Elementary	12	1	1	1
Secondary	5	1	0	1

*Data obtained in 1972

TABLE B.17
Community In Which Live and Teach*

	Rural		Small Town		Suburban		Metropolitan	
	f	%	f	%	f	%	f	%
Elementary	3	20.0	10	67.0	1	6.5	1	6.5
Secondary	2	28.5	4	57.0	1	14.5	0	0

*Data obtained in 1973

TABLE B.18
Athletic Participation

	High School		College		Post-College	
	Yes	No	Yes	No	Yes	No
Elementary	3	12	0	15	3	12
Secondary	2	5	1	6	2	5

TABLE B.19
Music Participation

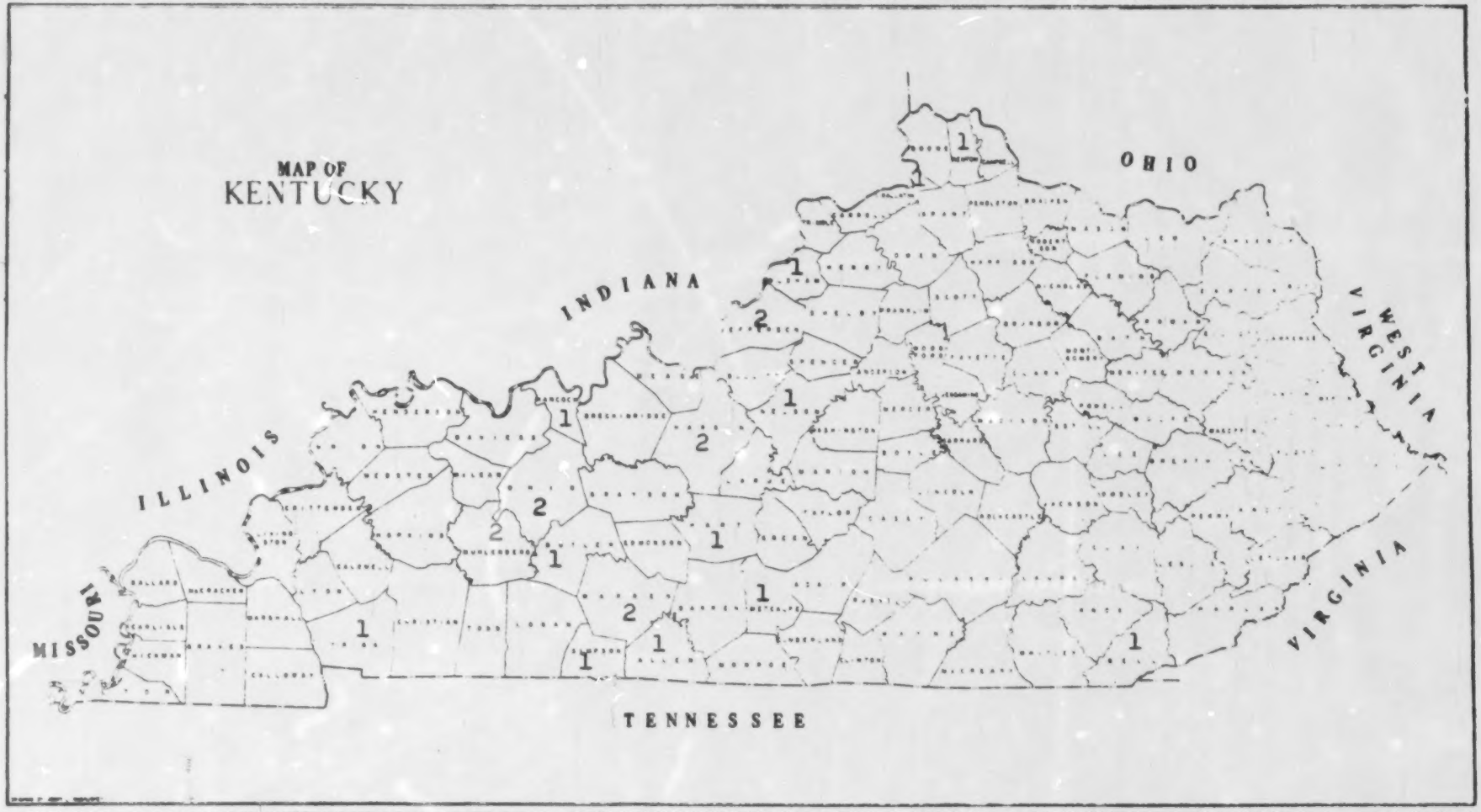
	High School		College		Post-College	
	Yes	No	Yes	No	Yes	No
Elementary	4	11	0	15	1	14
Secondary	4	3	0	7	0	7

TABLE B.20
Speech and Drama Participation

	High School		College		Post-College	
	Yes	No	Yes	No	Yes	No
Elementary	2	13	0	15	0	15
Secondary	2	5	0	7	1	6

TABLE B.21
Societies and Orgaizations Participation

	Professional		Social		Service	
	Col.	Post-Col.	Col.	Post-Col.	Col.	Post-Col.
Elementary	13	15	4	4	0	3
Secondary	4	4	1	0	1	0



Number of Participants
Per County Observed
For
CYCLE I PHASE II Spring 1973

APPENDIX C

SOURCE TABLES

TABLE C.1

Indirect to Direct Ratio (i/d) - Elementary

Source	SS	df	MS	F	P
Between	0.01	1	0.01	0.02	N.S.
Within	4.40	14	0.31	. .	. .
Adjusted	5.13	14	0.37	. .	. .
Total	9.54	29	. .	. .	. .

TABLE C.2

Indirect to Direct Ratio (i/d) - Secondary

Source	SS	df	MS	F	P
Between	18.92	1	18.92	0.58	N.S.
Within	375.21	6	62.53	. .	. .
Adjusted	194.68	6	32.45	. .	. .
Total	588.80	13	. .	. .	. .

TABLE C.3

Indirect to Direct Ratio (I/D) - Elementary

Source	SS	df	MS	F	P
Between	0.22	1	0.22	0.71	N.S.
Within	2.68	14	0.19	. .	. .
Adjusted	4.30	14	0.31	. .	. .
Total	7.20	29	. .	. .	. .

TABLE C.4

Indirect to Direct Ratio (I/D) - Secondary

Source	SS	df	MS	F	P
Between	0.44	1	0.44	4.39	N.S.
Within	1.12	6	0.19	. .	. .
Adjusted	0.60	6	0.10	. .	. .
Total	2.17	13	. .	. .	. .

TABLE C.5

Student Talk to Teacher Talk Ratio - Elementary

Source	SS	df	MS	F	P
Between	0.05	1	0.05	0.65	N.S.
Within	1.15	14	0.08	. .	. .
Adjusted	1.12	14	0.08	. .	. .
Total	2.31	29	. .	. .	. .

TABLE C.6

Student Talk to Teacher Talk Ratio - Secondary

Source	SS	df	MS	F	P
Between	0.51	1	0.51	3.52	N.S.
Within	17.85	6	2.98	. .	. .
Adjusted	0.86	6	0.14	. .	. .
Total	19.23	13	. .	. .	. .

TABLE C.7

Silence to Total Ratio - Elementary

Source	SS	df	MS	F	P
Between	0.02	1	0.02	0.62	N.S.
Within	0.44	14	0.03	. .	. .
Adjusted	0.35	14	0.03	. .	. .
Total	0.82	29	. .	. .	. .

TABLE C.8

Silence to Total Ratio - Secondary

Source	SS	df	MS	F	P
Between	0.00	1	0.00	0.05	N.S.
Within	0.43	6	0.07	. .	. .
Adjusted	0.14	6	0.02	. .	. .
Total	0.56	13	. .	. .	. .

TABLE C.9

Lecture to Total Ratio - Elementary

Source	SS	df	MS	F	P
Between	0.02	1	0.02	3.64	N.S.
Within	0.05	14	0.00	. .	. .
Adjusted	0.07	14	0.01	. .	. .
Total	0.14	29	. .	. .	. .

TABLE C.10

Lecture to Total Ratio - Secondary

Source	SS	df	MS	F	P
Between	0.02	1	0.02	3.52	N.S.
Within	0.40	6	0.07	. .	. .
Adjusted	0.04	6	0.01	. .	. .
Total	0.46	13	. .	. .	. .

TABLE C.11

Indirect to Total Ratio - Elementary

Source	SS	df	MS	F	P
Between	0.00	1	0.00	0.11	N.S.
Within	0.03	14	0.00	. .	. .
Adjusted	0.03	14	0.00	. .	. .
Total	0.06	29	. .	. .	. .

TABLE C.12

Indirect to Total Ratio - Secondary

Source	SS	df	MS	F	P
Between	0.00	1	0.00	1.46	N.S.
Within	0.02	6	0.00	. .	. .
Adjusted	0.00	6	0.00	. .	. .
Total	0.03	13	. .	. .	. .

TABLE C.13

Direct to Total Ratio - Elementary

Source	SS	df	MS	F	P
Between	0.00	1	0.00	0.40	N.S.
Within	0.03	14	0.00	. .	. .
Adjusted	0.02	14	0.00	. .	. .
Total	0.06	29	. .	. .	. .

TABLE C.14

Direct to Total Ratio - Secondary

Source	SS	df	MS	F	P
Between	0.00	1	0.00	3.30	N.S.
Within	0.01	6	0.00	. .	. .
Adjusted	0.00	6	0.00	. .	. .
Total	0.02	13	. .	. .	. .

TABLE C.15

Teacher Talk to Total Ratio - Elementary

Source	SS	df	MS	F	P
Between	0.00	1	0.00	0.08	N.S.
Within	0.17	14	0.01	. .	. .
Adjusted	0.15	14	0.01	. .	. .
Total	0.33	29	. .	. .	. .

TABLE C.16

Teacher Talk to Total Ratio - Secondary

Source	SS	df	MS	F	P
Between	0.02	1	0.02	5.45	N.S.
Within	0.69	6	0.12	. .	. .
Adjusted	0.02	6	0.00	. .	. .
Total	0.73	13	. .	. .	. .

TABLE C.17

Student Question to Student Response Ratio - Elementary

Source	SS	df	MS	F	P
Between	0.00	1	0.00	0.04	N.S.
Within	0.14	14	0.01	. .	. .
Adjusted	0.12	14	0.01	. .	. .
Total	0.26	29	. .	. .	. .

TABLE C.18

Student Question to Student Response Ratio - Secondary

Source	SS	df	MS	F	P
Between	0.05	1	0.05	1.81	N.S.
Within	0.57	6	0.10	. .	. .
Adjusted	0.15	6	0.03	. .	. .
Total	0.77	13	. .	. .	. .

TABLE C.19

Student Talk to Total Ratio - Elementary

Source	SS	df	MS	F	P
Between	0.01	1	0.01	0.71	N.S.
Within	0.21	14	0.02	. .	. .
Adjusted	0.17	14	0.01	. .	. .
Total	0.39	29	. .	. .	. .

TABLE C.20

Student Talk to Total Ratio - Secondary

Source	SS	df	MS	F	P
Between	0.03	1	0.03	1.81	N.S.
Within	0.25	6	0.04	. .	. .
Adjusted	0.10	6	0.02	. .	. .
Total	0.38	13	. .	. .	. .

TABLE C.21

COR 1 (Apathetic to Alert) - Elementary

Source	SS	df	MS	F	P
Between	520.81	1	520.81	5.64	<.05
Within	2271.69	14	162.26	. .	. .
Adjusted	1291.69	14	92.26	. .	. .
Total	4084.19	29	. .	. .	. .

TABLE C.22

COR 1 (Apathetic to Alert) - Secondary

Source	SS	df	MS	F	P
Between	144.64	1	144.64	0.92	N.S.
Within	742.86	6	123.81	. .	. .
Adjusted	942.86	6	157.14	. .	. .
Total	1830.36	13	. .	. .	. .

TABLE C.23

COR 2 (Obstructive to Responsive) - Elementary

Source	SS	df	MS	F	P
Between	187.50	1	187.50	2.84	N.S.
Within	5375.00	14	383.93	. .	. .
Adjusted	925.00	14	66.07	. .	. .
Total	6487.50	29	. .	. .	. .

TABLE C.24

COR 2 (Obstructive to Responsive) - Secondary

Source	SS	df	MS	F	P
Between	28.57	1	28.57	0.11	N.S.
Within	2310.71	6	385.12	. .	. .
Adjusted	1496.43	6	249.40	. .	. .
Total	3835.71	13	. .	. .	. .

TABLE C.25

COR 3 (Uncertain to Confident) - Elementary

Source	SS	df	MS	F	P
Between	53.31	1	53.31	0.29	N.S.
Within	2400.00	14	171.43	. .	. .
Adjusted	2546.69	14	181.91	. .	. .
Total	5000.00	29	. .	. .	. .

TABLE C.26

COR 3 (Uncertain to Confident) - Secondary

Source	SS	df	MS	F	P
Between	350.00	1	350.00	7.00	<.05
Within	671.43	6	111.90	. .	. .
Adjusted	300.00	6	50.00	. .	. .
Total	1321.43	13	. .	. .	. .

TABLE C.27

COR 4 (Depending to Initiating) - Elementary

Source	SS	df	MS	F	P
Between	163.33	1	163.33	1.44	N.S.
Within	4046.67	14	289.05	. .	. .
Adjusted	1586.67	14	113.33	. .	. .
Total	5796.67	29	. .	. .	. .

TABLE C.28

COR 5 (Partial to Fair) - Elementary

Source	SS	df	MS	F	P
Between	700.81	1	700.81	5.99	<.05
Within	1820.00	14	130.00	. .	. .
Adjusted	1636.69	14	116.91	. .	. .
Total	4157.50	29	. .	. .	. .

TABLE C.29

COR 5 (Partial to Fair) - Secondary

Source	SS	df	MS	F	P
Between	350.00	1	350.00	3.82	N.S.
Within	50.00	6	8.33	. .	. .
Adjusted	550.00	6	91.67	. .	. .
Total	950.00	13	. .	. .	. .

TABLE C.30

COR 6 (Autocratic to Democratic) - Elementary

Source	SS	df	MS	F	P
Between	53.33	1	53.33	0.45	N.S.
Within	4471.67	14	319.40	. .	. .
Adjusted	1671.67	14	119.40	. .	. .
Total	6196.67	29	. .	. .	. .

TABLE C.31

COR 6 (Autocratic to Democratic) - Secondary

Source	SS	df	MS	F	P
Between	787.50	1	787.50	3.50	N.S.
Within	785.71	6	130.95	. .	. .
Adjusted	1350.00	6	225.00	. .	. .
Total	2923.21	13	. .	. .	. .

TABLE C.32

COR 7 (Aloof to Responsive) - Elementary

Source	SS	df	MS	F	P
Between	140.81	1	140.81	0.99	N.S.
Within	3970.00	14	283.57	. .	. .
Adjusted	1996.69	14	142.62	. .	. .
Total					

TABLE C.33

COR 7 (Aloof to Responsive) - Secondary

Source	SS	df	MS	F	P
Between	144.64	1	144.64	1.76	N.S.
Within	1350.00	6	225.00	. .	. .
Adjusted	492.86	6	82.14	. .	. .
Total	1987.50	13	. .	. .	. .

TABLE C.34

COR 8 (Restricted to Understanding) - Elementary

Source	SS	df	MS	F	P
Between	7.50	1	7.50	0.06	N.S.
Within	2511.67	14	179.40	. .	. .
Adjusted	1655.00	14	118.21	. .	. .
Total	4174.17	29	. .	. .	. .

TABLE C.35

COR 8 (Restricted to Understanding) - Secondary

Source	SS	df	MS	F	P
Between	216.07	1	216.07	2.61	N.S.
Within	1117.86	6	186.31	. .	. .
Adjusted	496.43	6	82.74	. .	. .
Total	1830.36	13	. .	. .	. .

TABLE C.36

COR 9 (Harsh to Kindly) - Elementary

Source	SS	df	MS	F	P
Between	13.33	1	13.33	0.19	N.S.
Within	3100.00	14	221.43	. .	. .
Adjusted	986.67	14	70.48	. .	. .
Total	4100.00	29	. .	. .	. .

TABLE C.37

COR 9 (Harsh to Kindly) - Secondary

Source	SS	df	MS	F	P
Between	28.57	1	28.57	0.46	N.S.
Within	985.71	6	164.29	. .	. .
Adjusted	371.43	6	61.90	. .	. .
Total	1385.71	13	. .	. .	. .

TABLE C.38

COR 10 (Dull to Stimulating) - Elementary

Source	SS	df	MS	F	P
Between	20.83	1	20.83	0.12	N.S.
Within	3320.00	14	237.14	. .	. .
Adjusted	2516.67	14	179.76	. .	. .
Total	5857.50	29	. .	. .	. .

TABLE C.39

COR 10 (Dull to Stimulating) - Secondary

Source	SS	df	MS	F	P
Between	216.07	1	216.07	1.80	N.S.
Within	1642.86	6	273.81	. .	. .
Adjusted	721.43	6	120.24	. .	. .
Total	2580.36	13	. .	. .	. .

TABLE C.40

COR 11 (Sterotyped to Original) - Elementary

Source	SS	df	MS	F	P
Between	140.83	1	140.83	1.27	N.S.
Within	3486.67	14	249.05	. .	. .
Adjusted	1546.67	14	110.48	. .	. .
Total	5174.17	29	. .	. .	. .

TABLE C.41

COR 11 (Sterotyped to Original) - Secondary

Source	SS	df	MS	F	P
Between	114.29	1	114.29	0.46	N.S.
Within	942.86	6	157.14	. .	. .
Adjusted	1485.71	6	247.62	. .	. .
Total	2542.86	13	. .	. .	. .

TABLE C.42

COR 12 (Apathetic to Alert) - Elementary

Source	SS	df	MS	F	P
Between	30.00	1	30.00	0.39	N.S.
Within	2716.69	14	194.05	. .	. .
Adjusted	1070.00	14	76.43	. .	. .
Total	3816.69	29	. .	. .	. .

TABLE C.43

COR 12 (Apathetic to Alert) - Secondary

Source	SS	df	MS	F	P
Between	28.57	1	28.57	0.43	N.S.
Within	1067.86	6	177.98	. .	. .
Adjusted	396.43	6	66.07	. .	. .
Total	1492.86	13	. .	. .	. .

TABLE C.44

COR 13 (Unimpressive to Attractive) - Elementary

Source	SS	df	MS	F	P
Between	187.50	1	187.50	3.18	N.S.
Within	821.69	14	58.69	. .	. .
Adjusted	825.00	14	58.93	. .	. .
Total	1834.19	29	. .	. .	. .

TABLE C.45

COR 13 (Unimpressive to Attractive) - Secondary

Source	SS	df	MS	F	P
Between	7.14	1	163.31	1.62	N.S.
Within	585.71	6	115.12	. .	. .
Adjusted	142.86	6	100.83	. .	. .
Total	735.71	13	. .	. .	. .

TABLE C.46

COR 14 (Evading to Responsible) - Elementary

Source	SS	df	MS	F	P
Between	163.31	1	163.31	1.62	N.S.
Within	1611.69	14	115.12	. .	. .
Adjusted	1411.69	14	100.83	. .	. .
Total	3186.69	29	. .	. .	. .

TABLE C.47

COR 14 (Evading to Responsible) - Secondary

Source	SS	df	MS	F	P
Between	1.79	1	1.79	0.03	N.S.
Within	767.86	6	127.98	. .	. .
Adjusted	310.71	6	51.79	. .	. .
Total	1080.36	13	. .	. .	. .

TABLE C.48

COR 15 (Erratic to Steady) - Elementary

Source	SS	df	MS	F	P
Between	333.31	1	333.31	3.18	N.S.
Within	1996.69	14	142.62	. .	. .
Adjusted	1466.69	14	104.76	. .	. .
Total	1080.36	29	. .	. .	. .

TABLE C.49

COR 15 (Erratic to Steady) - Secondary

Source	SS	df	MS	F	P
Between	178.57	1	178.57	1.49	N.S.
Within	1085.71	6	180.95	. .	. .
Adjusted	721.43	6	120.24	. .	. .
Total	1985.71	13	. .	. .	. .

TABLE C.50

COR 16 (Excitable to Poised) - Elementary

Source	SS	df	MS	F	P
Between	163.31	1	163.31	1.42	N.S.
Within	2955.00	14	211.07	. .	. .
Adjusted	1611.69	14	115.12	. .	. .
Total	4730.00	29	. .	. .	. .

TABLE C.51

COR 16 (Excitable to Poised) - Secondary

Source	SS	df	MS	F	P
Between	644.64	1	644.64	4.21	N.S.
Within	875.00	6	145.83	. .	. .
Adjusted	917.86	6	152.98	. .	. .
Total	2437.50	13	. .	. .	. .

TABLE C.52

COR 17 (Uncertain to Confident) - Elementary

Source	SS	df	MS	F	P
Between	40.81	1	40.81	0.13	N.S.
Within	3670.00	14	262.14	. .	. .
Adjusted	1846.69	14	131.91	. .	. .
Total	5557.50	29	. .	. .	. .

TABLE C.53

COR 17 (Uncertain to Confident) - Secondary

Source	SS	df	MS	F	P
Between	516.07	1	516.07	4.79	N.S.
Within	1575.00	6	262.50	. .	. .
Adjusted	646.43	6	107.74	. .	. .
Total	2727.50	13	. .	. .	. .

TABLE C.54

COR 18 (Disorganized to Systematic) - Elementary

Source	SS	df	MS	F	P
Between	163.31	1	163.31	1.81	N.S.
Within	1345.00	14	96.07	. .	. .
Adjusted	1261.69	14	90.12	. .	. .
Total	2770.00	29	. .	. .	. .

TABLE C.55

COR 18 (Disorganized to Systematic) - Secondary

Source	SS	df	MS	F	P
Between	216.07	1	216.07	5.26	N.S.
Within	660.71	6	110.12	. .	. .
Adjusted	246.43	6	41.07	. .	. .
Total	1123.21	13	. .	. .	. .

TABLE C.56

COR 19 (Inflexible to Adaptable) - Elementary

Source	SS	df	MS	F	P
Between	213.33	1	213.33	1.88	N.S.
Within	3666.67	14	261.90	. .	. .
Adjusted	1586.67	14	113.33	. .	. .
Total	5466.67	29	. .	. .	. .

TABLE C.57

COR 19 (Inflexible to Adaptable) - Secondary

Source	SS	df	MS	F	P
Between	1207.14	1	1207.14	13.34	<.05
Within	1892.86	6	315.48	. .	. .
Adjusted	542.86	6	90.48	. .	. .
Total	3642.86	13	. .	. .	. .

TABLE C.58

COR 20 (Pessimistic to Optimistic) - Elementary

Source	SS	df	MS	F	P
Between	100.81	1	100.81	0.72	N.S.
Within	3761.69	14	268.69	. .	. .
Adjusted	1961.69	14	140.12	. .	. .
Total	5824.19	29	. .	. .	. .

TABLE C.59

COR 20 (Pessimistic to Optimistic) - Secondary

Source	SS	df	MS	F	P
Between	216.07	1	216.07	1.93	N.S.
Within	1121.43	6	186.90	. .	. .
Adjusted	671.43	6	111.90	. .	. .
Total	2008.93	13	. .	. .	. .

TABLE C.60

COR 21 (Immature to Integrated) - Elementary

Source	SS	df	MS	F	P
Between	40.81	1	40.81	0.33	N.S.
Within	1255.00	14	89.64	. .	. .
Adjusted	1721.69	14	122.98	. .	. .
Total	3017.50	29	. .	. .	. .

TABLE C.61

COR 21 (Immature to Integrated) - Secondary

Source	SS	df	MS	F	P
Between	87.50	1	87.50	0.47	N.S.
Within	396.43	6	66.07	. .	. .
Adjusted	1125.00	6	187.50	. .	. .
Total	1608.93	13	. .	. .	. .

TABLE C.62

COR 22 (Narrow to Broad) - Elementary

Source	SS	df	MS	F	P
Between	907.50	1	907.50	12.04	<.01
Within	1411.69	14	100.83	. .	. .
Adjusted	1055.00	14	75.36	. .	. .
Total	3374.19	29	. .	. .	. .

TABLE C.63

COR 22 (Narrow to Broad) - Secondary

Source	SS	df	MS	F	P
Between	401.79	1	401.79	11.44	<.05
Within	1096.43	6	182.74	. .	. .
Adjusted	210.71	6	35.12	. .	. .
Total	1708.93	13	. .	. .	. .

TABLE C.64

SET 1 (Friendly and Cheerful) - Elementary

Source	SS	df	MS	F	P
Between	2235.00	1	2235.00	1.14	N.S.
Within	4506.00	4	1126.50	. .	. .
Adjusted	7866.00	4	1966.50	. .	. .
Total	14607.00	9	. .	. .	. .

TABLE C.65

SET 1 (Friendly and Cheerful) - Secondary

Source	SS	df	MS	F	P
Between	1805.00	1	1805.00	4.72	N.S.
Within	22434.00	6	3739.00	. .	. .
Adjusted	2296.00	6	382.67	. .	. .
Total	26535.00	13	. .	. .	. .

TABLE C.66

SET 2 (Knowledgeable and Poised) - Elementary

Source	SS	df	MS	F	P
Between	1177.00	1	1177.00	4.30	N.S.
Within	5141.00	4	1285.25	. .	. .
Adjusted	1096.00	4	274.00	. .	. .
Total	7414.00	9	. .	. .	. .

TABLE C.67

SET 2 (Knowledgeable and Poised) - Secondary

Source	SS	df	MS	F	P
Between	293.00	1	293.00	0.37	N.S.
Within	4821.00	6	803.50	. .	. .
Adjusted	4717.00	6	786.17	. .	. .
Total	9831.00	13	. .	. .	. .

TABLE C.68

SET 3 (Lively and Interesting) - Elementary

Source	SS	df	MS	F	P
Between	2132.00	1	2132.00	1.17	N.S.
Within	7377.00	4	1844.25	. .	. .
Adjusted	7277.00	4	1819.25	. .	. .
Total	16786.00	9	. .	. .	. .

TABLE C.69

SET 3 (Lively and Interesting) - Secondary

Source	SS	df	MS	F	P
Between	2301.37	1	2301.37	6.08	< .05
Within	17336.50	6	2889.42	. .	. .
Adjusted	2269.37	6	378.23	. .	. .
Total	21907.25	13	. .	. .	. .

TABLE C.70

SET 4 (Firm Control) - Elementary

Source	SS	df	MS	F	P
Between	8970.00	1	8970.00	2.65	N.S.
Within	16633.50	4	4158.37	. .	. .
Adjusted	13526.75	4	3381.69	. .	. .
Total	39130.25	9	. .	. .	. .

TABLE C.71

SET 4 (Firm Control) - Secondary

Source	SS	df	MS	F	P
Between	111.00	1	111.00	0.14	N.S.
Within	5896.00	6	982.67	. .	. .
Adjusted	4772.00	6	795.33	. .	. .
Total	10779.00	13	. .	. .	. .

TABLE C.72

SET 5 (Non-Directive) - Elementary

Source	SS	df	MS	F	P
Between	176.31	1	176.31	0.08	N.S.
Within	23782.44	4	5945.61	. .	. .
Adjusted	9179.19	4	2294.30	. .	. .
Total	33137.94	9	. .	. .	. .

TABLE C.70

SET 5 (Non-Directive) - Secondary

Source	SS	df	MS	F	P
Between	64.25	1	64.25	0.04	N.S.
Within	2824.50	6	470.75	. .	. .
Adjusted	10995.75	6	1832.62	. .	. .
Total	13884.50	13	. .	. .	. .

TABLE C.71

SET Composite Score - Elementary

Source	SS	df	MS	F	P
Between	2845.94	1	2845.94	2.43	N.S.
Within	8904.44	4	2226.11	. .	. .
Adjusted	4680.31	4	1170.08	. .	. .
Total	16430.69	9	. .	. .	. .

TABLE C.72

SET Composite Score - Secondary

Source	SS	df	MS	F	P
Between	17.00	1	17.00	0.05	N.S.
Within	7241.00	6	1206.83	. .	. .
Adjusted	2240.00	6	373.33	. .	. .
Total	9498.00	13	. .	. .	. .

TABLE C.73

Cooperating Teacher/Administrator
TEPS (Subject Matter Competence) - Elementary

Source	SS	df	MS	F	P
Between	0.13	1	0.13	0.32	N.S.
Within	9.20	14	0.66	. .	. .
Adjusted	5.87	14	0.42	. .	. .
Total	15.20	29	. .	. .	. .

TABLE C.74

Cooperating Teacher/Administrator
TEPS (Subject Matter Competence) - Secondary

Source	SS	df	MS	F	P
Between	0.29	1	0.29	0.63	N.S.
Within	10.71	6	1.79	. .	. .
Adjusted	2.71	6	0.45	. .	. .
Total	13.71	13	. .	. .	. .

TABLE C.75

Cooperating Teacher/Administrator
TEPS (Relations With Students) - Elementary

Source	SS	df	MS	F	P
Between	0.00	1	0.00	0.00	N.S.
Within	14.47	14	1.30	. .	. .
Adjusted	7.00	14	0.50	. .	. .
Total	21.47	29	. .	. .	. .

TABLE C.76
Cooperating Teacher/Administrator
TEPS (Relations With Students) - Secondary

Source	SS	df	MS	F	P
Between	1.79	1	1.79	6.25	N.S.
Within	3.71	6	0.62	. .	. .
Adjusted	1.71	6	0.29	. .	. .
Total	7.21	13	. .	. .	. .

TABLE C.77
Cooperating Teacher/Administrator
TEPS (Appropriateness of Assignments) - Elementary

Source	SS	df	MS	F	P
Between	0.00	1	0.00	0.00	N.S.
Within	12.67	14	0.90	. .	. .
Adjusted	6.00	14	0.43	. .	. .
Total	18.67	29	. .	. .	. .

TABLE C.78
Cooperating Teacher/Administrator
TEPS (Appropriateness of Assignments) - Secondary

Source	SS	df	MS	F	P
Between	0.29	1	0.29	0.63	N.S.
Within	3.86	6	0.64	. .	. .
Adjusted	2.71	6	0.45	. .	. .
Total	6.86	13	. .	. .	. .

TABLE C.79
Cooperating Teacher/Administrator
TEPS (Overall Classroom Effectiveness) - Elementary

Source	SS	df	MS	F	P
Between	0.03	1	0.03	0.09	N.S.
Within	6.00	14	0.43	. .	. .
Adjusted	5.47	14	0.39	. .	. .
Total	11.50	29	. .	. .	. .

TABLE C.80
Cooperating Teacher/Administrator
TEPS (Overall Classroom Effectiveness) - Secondary

Source	SS	df	MS	F	P
Between	0.07	1	0.07	0.18	N.S.
Within	6.43	6	1.07	. .	. .
Adjusted	2.43	6	0.40	. .	. .
Total	8.93	13	. .	. .	. .

TABLE C.81
Cooperating Teacher/Peer Average
TEPS (Subject Matter Competence) - Elementary

Source	SS	df	MS	F	P
Between	0.01	1	0.01	0.02	N.S.
Within	4.55	14	0.33	. .	. .
Adjusted	7.62	14	0.54	. .	. .
Total	12.18	29	. .	. .	. .

TABLE C.82
Cooperating Teacher/Peer Average
TEPS (Subject Matter Competence) - Secondary

Source	SS	df	MS	F	P
Between	0.0	1	0.0	0.0	N.S.
Within	5.00	6	0.83	. .	. .
Adjusted	2.00	6	0.33	. .	. .
Total	7.00	13	. .	. .	. .

TABLE C.83
Cooperating Teacher/Peer Average
TEPS (Relations With Students) - Elementary

Source	SS	df	MS	F	P
Between	0.41	1	0.41	1.05	N.S.
Within	10.67	14	0.76	. .	. .
Adjusted	5.47	14	0.39	. .	. .
Total	16.54	29	. .	. .	. .

TABLE C.84
Cooperating Teacher/Peer Average
TEPS (Relations With Students) - Secondary

Source	SS	df	MS	F	P
Between	0.64	1	0.64	0.94	N.S.
Within	6.25	6	1.04	. .	. .
Adjusted	4.11	6	0.68	. .	. .
Total	11.00	13	. .	. .	. .

TABLE C.85
Cooperating Teacher/Peer Average
TEPS (Appropriateness of Assignments) - Elementary

Source	SS	df	MS	F	P
Between	0.53	1	0.53	0.91	N.S.
Within	6.22	14	0.44	. .	. .
Adjusted	8.22	14	0.59	. .	. .
Total	14.97	29	. .	. .	. .

TABLE C.86
Cooperating Teacher/Peer Average
TEPS (Appropriateness of Assignments) - Secondary

Source	SS	df	MS	F	P
Between	0.64	1	0.64	1.07	N.S.
Within	3.61	6	0.60	. .	. .
Adjusted	3.61	6	0.60	. .	. .
Total	7.86	13	. .	. .	. .

TABLE C.87
Cooperating Teacher/Peer Average
TEPS (Overall Classroom Effectiveness) - Elementary

Source	SS	df	MS	F	P
Between	0.07	1	0.07	0.16	N.S.
Within	5.62	14	0.40	. .	. .
Adjusted	6.55	14	0.47	. .	. .
Total	12.24	29	. .	. .	. .

TABLE C.88
Cooperating Teacher/Peer Average
TEPS (Overall Classroom Effectiveness) - Secondary

Source	SS	df	MS	F	P
Between	0.16	1	0.16	0.30	N.S.
Within	6.36	6	1.06	. .	. .
Adjusted	3.21	6	0.54	. .	. .
Total	9.73	13	. .	. .	. .

Source	SS	df	MS	F	P
Between					
Within					
Adjusted					
Total					

Source	SS	df	MS	F	P
Between					
Within					
Adjusted					
Total					